Welcome.....7

Using Your VAIO Notebook.....9

Using the Keyboard.....10

Functions of the keyboard keys 11

Combinations and functions with the Windows key 12

Indicators 13

Indicator lights 13

Combinations and functions with the Fn key 14

Using the Touchpad 16

Using the Floppy Disk Drive 18

To insert a floppy disk 18

To remove a floppy disk 18

To remove the floppy disk drive.....19

To reinsert the floppy disk drive.....20

Using the Optical Disc Drive 21

To insert a disc.....21

To remove a disc.....22

To play a DVD.....23

To play an audio CD.....24

Notes on CD and DVD media 25

To write data to a CD-RW or CD-R disc.....26

Using PC Cards 27

To insert a PC card.....27

To remove a PC Card.....28

Notes on PC Cards.....29

Using a Second Battery Pack 30

To insert a second battery pack.....30

To charge the second battery pack.....31

To remove the second battery pack 32

Using the Weight Saver 34
To attach the weight saver 34
To remove the weight saver 34
Using Power Saving Modes 36
Normal mode 36
Standby mode 36
Hibernate mode 36
Notes on power saving modes 37
Connecting a Phone Line 38
Connecting to a LAN 39
To set up your ethernet connection 39

Connecting Peripheral Devices 41

Connecting a Port Replicator 42
To attach your notebook to the port replicator 42
To remove your notebook from the port replicator 44
Connecting an External Mouse or Keyboard 46
To connect an external mouse or keyboard 46
Connecting a Parallel Port Printer 47
To connect a printer 47
Connecting a USB Printer 48
To connect a USB printer 48
Connecting an External Display 49
To connect a computer display 49
To connect a multimedia computer display 49
To connect a projector 50
To select a display 51

Connecting a TV Display 52
To connect a TV 52
Changing the display resolution for TV Out 52
Notes on TV display 53
Connecting a USB Device.....54
To connect a USB device.....54
Connecting an i.LINK Device.....55
To connect a digital video camera recorder.....55
Notes on i.LINK devices 56
Connecting VAIO computers.....58
Connecting with i.LINK 58
Connecting External Speakers 59
Before connecting your external speakers 59
To connect external speakers.....59
Connecting an External Microphone.....60
To connect an external microphone.....60
Expanding Your Notebook Capabilities 61
Personal Digital Assistant.....61
Wireless LAN Access Point 61
Wireless LAN PC Card.....62

Customizing Your VAIO Notebook 63

Displaying the Sony Notebook Setup Screen 64
To display the Sony Notebook Setup screen 64
Sony Notebook Setup Tabs.....65
Controlling Power Management 66
To view the Power Management status icons.....66
Power Management profiles 67
Power management commands 69
Conserving battery power.....70

Displaying Battery Information 71
To activate the Battery Information toolbar..... 71
Battery icon descriptions..... 71
To display detailed battery information 72
To customize the Battery Information toolbar and alarm system..... 73
Selecting the Display Mode 74
To select the display mode..... 74
To change the Window Design of Sony software..... 76

Adding Memory to Your VAIO Notebook 77

Precautions and Procedures 78
Typical expansion memory configuration 78
Removing a Memory Module..... 80
Installing a Memory Module 82
Viewing the Amount of Memory..... 84

About the Software on Your Notebook...85

Software Overview 86
Application, Driver, and System Recovery CDs 92
Using Your Recovery CDs 93
To use the Application Recovery CD(s)..... 93
To use the Driver Recovery CD(s) 93
To use the System Recovery CD(s) 98

Troubleshooting 101

Troubleshooting Your Notebook 102

My notebook does not start. 102
My notebook starts, but a BIOS error is displayed. 102
My notebook starts, but the message "Operating system not found" appears and Windows does not start. 103
My notebook stops responding or does not shut down. ...104
The Power Management setting is not responding. 104
The sound of my notebook's fan is too loud. 105
Why does the System Properties dialog box display a slower CPU speed than advertised? 105

Troubleshooting the LCD Screen.....106

My LCD screen is blank. 106
My LCD screen continues to show the previous screen. .106
The image on my connected external display is not centered or sized properly. 106
I want to change the video resolution of my display. 106
I want to change the display resolution for TV Out 106
I cannot switch the LCD display to TV, and vice versa. .107

Troubleshooting the Mouse and Touchpad.....108

My mouse does not work. 108
My touchpad does not work properly. 108
The pointer does not move while I am using the Touchpad or Mouse. 109

Troubleshooting Drives, PC Cards and Peripheral Devices.....110

My floppy disk drive cannot write to a floppy disk. 110
My optical drive is not playing a CD or DVD properly. .110
My optical drive tray does not open. 111
I cannot use Digital Video (DV) devices. The message "DV equipment seems to be disconnected or turned off" appears.

111
My PC Card is not working. 111
Troubleshooting Software..... 112
My software program stops responding or crashes..... 112
When I click an application icon, the message “You must insert the application CD into your optical drive” appears and the software does not start..... 112
I cannot use the DVgate software. 112
Troubleshooting the Modem..... 113
My modem does not work. 113
My modem connection is slow. 113
Troubleshooting Audio 114
My speakers make no sound. 114
My microphone does not work. 114
Troubleshooting the Printer 115
I cannot print. 115
Troubleshooting i.LINK devices 116
I cannot establish a connection between two VAIO computers when using an i.LINK cable..... 116

Getting Help.....117
Support Options 118
Software Support Information 120
Sony Service Center..... 122

Welcome

Congratulations on your purchase of this Sony VAIO® computer, and welcome to the VAIO Notebook User Guide.
This User Guide provides detailed information on all aspects of using your new VAIO computer, from keyboard functions to preinstalled software applications.
In the left navigation window, click the topics you want to learn more about, and that information will be displayed in this main window.

Using Your VAIO Notebook

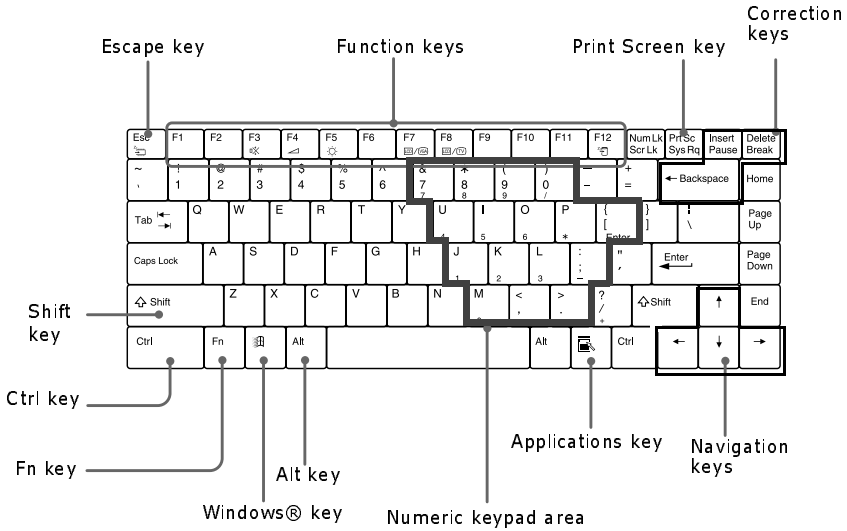
This section describes the following aspects of your new computer:

- ❑ Using the Keyboard
- ❑ Using the Touchpad
- ❑ Using the Floppy Disk Drive
- ❑ Using the Optical Disc Drive
- ❑ Using PC Cards
- ❑ Using a Second Battery Pack
- ❑ Using the Weight Saver
- ❑ Using Power Saving Modes
- ❑ Connecting a Phone Line
- ❑ Connecting to a LAN

Using the Keyboard

Your keyboard is very similar to a typewriter's, but the keyboard has additional keys that perform specific computer-related tasks.

Keyboard



Functions of the keyboard keys

Key	Description
Numeric keypad area	Contains the keys found on a typical calculator. Use the numeric keypad area to type numbers or to perform mathematical calculations such as addition and subtraction. Note that you must press the Num Lock key to activate the numeric keypad. (When you do so, the Num Lock light will be on.)
Navigation keys	Several keys are devoted to moving the cursor on the screen.
Correction keys	The Insert, Back Space, and Delete keys enable you to make corrections in your documents.
Function keys	The twelve function keys along the top of the keyboard are used to perform designated tasks. For example, in many applications, F1 is the Help key. The task associated with each function key may vary from one application to the next.
Escape key	The Esc (Escape) key is used to cancel commands.
Print Screen key	The Print Screen key takes an electronic snapshot of the screen and places it in the Windows® Clipboard. You can then paste the screen shot into a document and print it.
Operator keys (Shift, Ctrl, Alt keys)	Several keys are always used with at least one other key: Ctrl, Alt, and Shift. When held down with another key, the Ctrl (Control) and Alt (Alternate) keys offer another way to give commands. For example, in many applications, instead of choosing the Save command from a menu, you can hold down Ctrl and press S (referred to as Ctrl+S). The Shift key operates the same way as on a typewriter; it is used to produce capital letters or special symbols, such as @ and $.

Key	Description
Windows key	The key with the Windows® logo displays the Windows Start menu; it is the equivalent of clicking the Start button on the taskbar. See “Combinations and functions with the Windows key” for more information.
Fn key	The Fn key is used in combination with other keys to issue commands. See “Combinations and functions with the Fn key” for more information.
Applications key	The Applications key displays a shortcut menu of context-sensitive choices. Pressing this key is the equivalent of clicking the right mouse button.

Combinations and functions with the Windows key

Combination	Function
+ F1	Displays VAIO® Help and Support Center.
+ Tab	Switches the selected button on the taskbar.
+ D	Displays the Desktop.
+ E	Displays Windows Explorer.
+ F	Displays the Search window to find a file or folder. This is the equivalent of selecting Search from the Start menu.
+ Ctrl + F	Displays the Search Results: Computers window where you can locate other computers. This is the equivalent of selecting Search and then Computers from the Start menu.
+ M	Minimizes all displayed windows.

Combination	Function
Shift + + M	Returns all minimized windows to their previous size.
+ R	Displays the Run window. This is the equivalent of selecting Run from the Start menu.
Fn + + Insert	Displays the System Properties window. This is the equivalent of selecting Control Panel and then System from the Start menu.

Indicators

Indicator	Function
Power	Light is green when the power to the notebook is turned on, flashes amber in Standby mode, and turns off when the notebook is in Hibernate mode or powered off.
Battery 1 1	Indicates the status of the battery inserted in the battery bay on the left side of the notebook.
Battery 2 2	Indicates the status of the battery inserted in the multipurpose drive bay on the right side of the notebook.
Hard disk	Lights when data is being read from or written to the hard drive. Do not enter Standby mode or turn off the notebook when this indicator light is on.

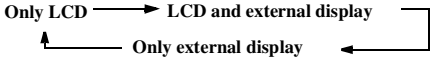
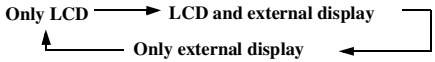
Indicator lights

Light	*On*	*Off*
Num Lock	The number keys in the numeric keypad are active.	The alphanumeric character keys in the keypad area are active.
Caps Lock	The letters appear in uppercase as you type. The Shift key lowers the case of typed letters when Caps Lock is on.	Letters appear in lower case as you type (unless you hold down the Shift key).
Scroll Lock	The screen scrolls differently. (Exactly how it scrolls depends on the specific application. It has no effect in many applications.)	Information moves across the display normally.

Combinations and functions with the Fn key

✍ If you switch user identities during a computing session, the Fn+F7 and Fn+F8 key functionality (if available on your computer) will be interrupted. To switch to an external display or monitor, see "Selecting the Display Mode" for more information.

Combinations/ Feature	*Function*
Fn+ (ESC) Standby	Puts the system into Standby mode, a power management state. To return the system to the active state, press any key.
Fn+ (F3) Mute On/Off	Toggles the built-in speaker off and on.
Fn+ (F4) Speaker volume	Adjusts the built-in speaker volume. To increase volume, press Fn+F4, then ↑ or →. To decrease volume, press Fn+F4, then ↓ or ←.
Fn+ (F5) Brightness control	Adjusts the brightness of the LCD. To increase light intensity, press Fn+F5 and then ↑ or →. To decrease light intensity, press Fn+F5 and then ↓ or ←.

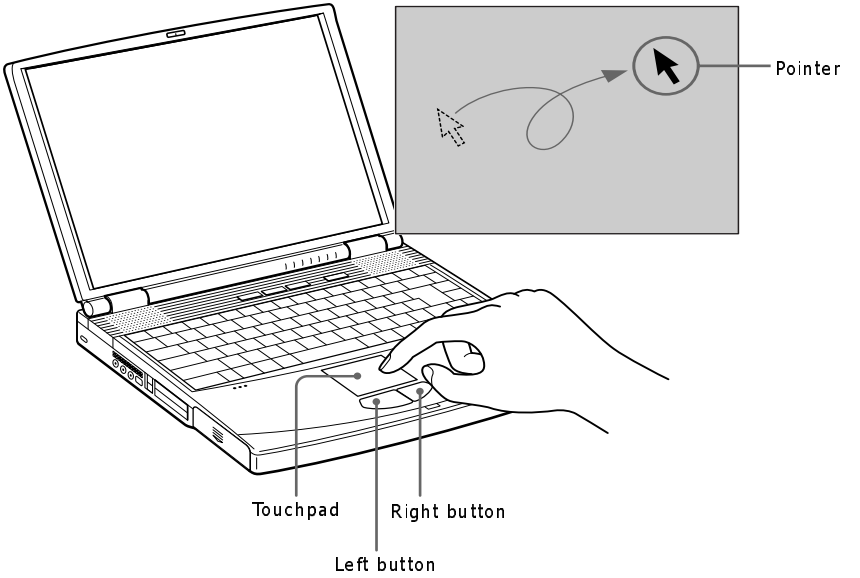
Combinations/ Feature	***Function***
Fn+ LCD/ VGA (F7) Switch to the external monitor/LCD	Toggles through the LCD, external display (connected to the ▢ Monitor port) and both LCD and external display. 
Fn+ LCD only/ TV (F8) Control TV Out	Toggles between LCD-only and dual LCD/TV display modes.  Connect the cable before you turn on the notebook, otherwise Fn + F8 will not work.
Fn+ Zz (F12) Hibernate	Provides for the lowest level of power consumption. When you execute this command, the state of the system and state of the peripheral devices are written to the hard disk and the system power is turned off. To return the system to its original state, use the power button to turn on power.
Fn+ F	Display control. Minimizes and maximizes the LCD screen. If the default display resolution is reduced, this function maximizes the display resolution to fit the screen size. Maximizing the display screen enables you to view the display at a greater resolution.

✍ Some functions are not available until Windows® launches.

Using the Touchpad

The keyboard contains a cursor-pointing device called a touchpad. You can point to, select, drag, and scroll objects on the screen using the built-in touchpad.

Touchpad



Action	*Description*
Point	Slide one finger on the touchpad to place the pointer on an item or object.
Click	Press the left button once.
Double-click	Press the left button twice.

Action	Description
Right-click	Press the right button once. In many applications, this action displays a shortcut menu of context-sensitive choices.
Drag	Slide one finger while pressing the left button.
Scroll	Move your finger along the right edge of the touchpad to scroll vertically. Move your finger along the bottom to scroll horizontally. (The scroll function is available only with applications that support a touchpad scroll feature.)

See Mouse Properties for information on touchpad features, such as clicking both buttons simultaneously, adjusting touchpad speed, and Easy Launcher functions. To access Mouse Properties, go to Start, select Control Panel, and click the Mouse icon.

Using the Floppy Disk Drive

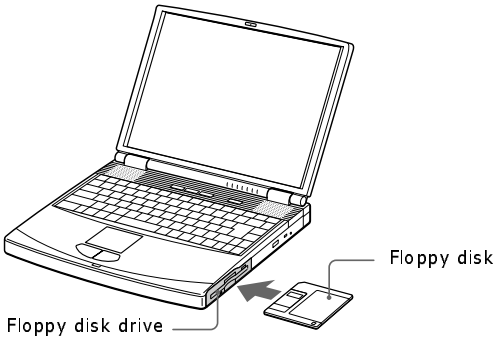
Your notebook is supplied with the floppy disk drive in the multipurpose bay.

To insert a floppy disk

1 Hold the floppy disk with the label side facing up.

2 Gently push the floppy disk into the drive until it clicks into place.

Inserting a floppy disk

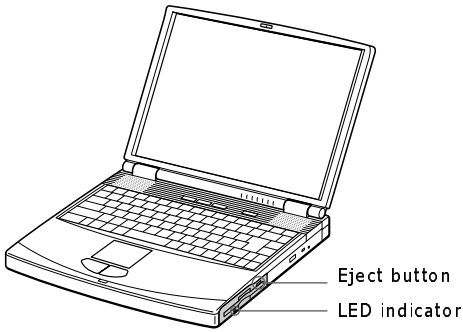


To remove a floppy disk

1 After you finish using the floppy disk, wait until the LED indicator turns off.

2 Press the Eject button to remove the floppy disk.

Removing a floppy disk



✍ Do not push the eject button when the LED indicator is turned on. Otherwise, data may be lost.

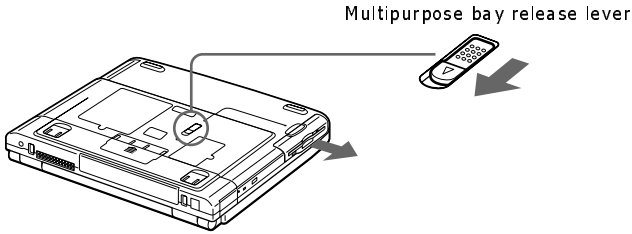
To remove the floppy disk drive

1 Turn off the notebook.

2 Locate the release lever on the bottom of the notebook.

3 Slide the lever in the direction of the arrow.

Multipurpose bay release lever



4 Slide the floppy disk drive out of the multipurpose bay.

5 Insert the weight saver. See “Using the Weight Saver” for more information.

To reinsert the floppy disk drive

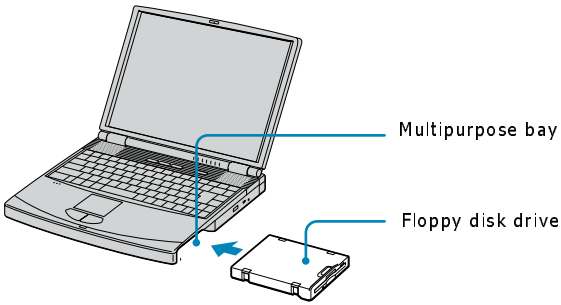
1 Turn off the notebook.

2 If another device is in the multipurpose bay, remove the device. See “To remove the second battery pack” for more information.

3 Insert the floppy disk drive into the multipurpose bay with the VAIO label facing up.

4 Continue pushing the drive into the bay until the release lever locks into place.

Inserting the floppy disk drive



Using the Optical Disc Drive

Your notebook comes with an optical disc drive, either a CD-RW/DVD Combo Drive or DVD-ROM drive, depending on the model you purchased.

> **Do not use adhesive labels to identify your discs. Adhesive labels may come off while the disc is in use in the optical drive, and may cause damage to the drive.**

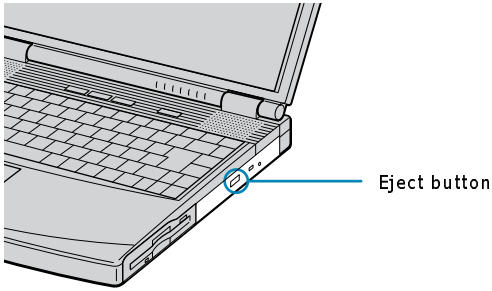
To insert a disc

When the notebook is in Standby or Hibernate mode, you cannot insert a disc. See "Controlling Power Management" for more information on Standby and Hibernate modes.

1 Turn on the notebook.

2 Press the Eject button to open the optical drive. The tray slides out.

Ejecting the tray

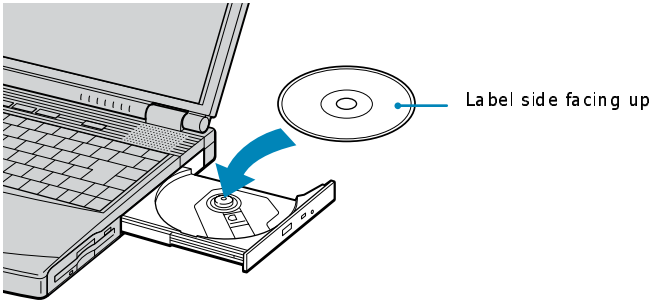


3 Place an optical disc on the tray with the label side facing up. For DVDs that can be played on both sides, the side of the disc facing up is the side that plays.

4 Push the disc onto the hub until the disc clicks securely into place.

Be sure to seat the disc firmly over the hub fingers. If you do not seat the disc firmly, you could damage the optical drive and you may not be able to open the tray.

Inserting an optical disc



5 Close the tray by pushing it gently.

To remove a disc

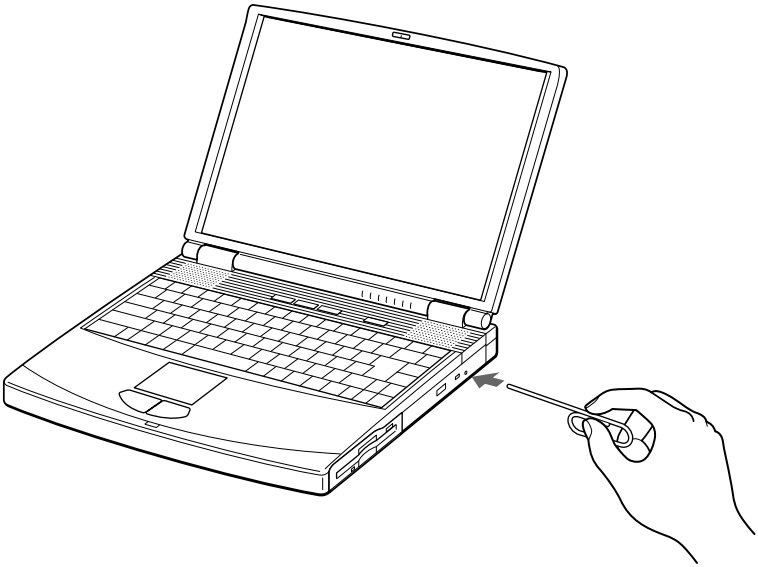
When the notebook is in power saving modes, you cannot remove a disc. See "Controlling Power Management" for more information about power saving modes.

1 After you finish using a disc, wait until the LED indicator turns off.

2 Press the Eject button to remove the disc.

3 If the disc does not come out when you press the Eject button, turn off the notebook and insert a thin, straight object (such as a paper clip) into the manual eject hole.

Manually removing a disc



To play a DVD

To play a DVD, you may use the optical disc drive and the preinstalled WinDVD® software. For more information on WinDVD, see the Help menu in the WinDVD application.

✍ Before you use the optical disc drive to play a DVD, quit any open applications.

Your optical disc drive can read most DVD-R media. When you are ready to play a DVD, read the suggestions below to maximize your video viewing experience.

- When playing a DVD on battery power, set the power management profile to DVD. You can also set the power management profile to Automatic Profile Selection if the display is not clear when using other profiles.

✍ Automatic Profile Selection sets the power management profile to DVD whenever a DVD is inserted. See “Controlling Power Management” for more information.

- If you connect your notebook to a TV display, you may need to adjust the display resolution. Read the suggestions below to set the display resolution to the proper dimensions. Also see "Selecting the Display Mode" for more information.
- If the notebook is set to the default display setting, part of the video screen will not appear. To view the entire screen, adjust the display resolution to 640 x 480. See "Connecting a TV Display" for more information.
- The screen resolution must be set to 640 x 480 dots in order to play a DVD while using the TV Out jack. See "Connecting a TV Display" for more information.

Some discs recorded at 20 or 24 bits may produce noise while playing. If you have audio devices connected, this may cause damage to your hearing and the speakers. Reduce the volume before playing a DVD.

You cannot use the Fn + F8 function to switch between LCD and TV once a DVD is inserted into the optical drive.

Do not switch between LCD and the external display while the DVD is playing. This may cause a malfunction, and you may need to restart the DVD software.

To play an audio CD

To play an audio CD, make sure the audio function is turned on. To do this, complete the following procedure.

1. Click Start, click Control Panel, click Performance and Maintenance, and then click System. The System Properties window appears.
2. Select the Hardware tab and then click Device Manager in the Device Manager box. A window appears, listing your notebook hardware devices.
3. Double-click DVD/CD-ROM drives. From the drop-down list, double-click the drive name. A properties window appears.
4. Click the Properties tab. Select the "Enable digital CD audio for this CD-ROM device" check box if it is not already selected, and then click OK.

You can play DVDs using the optical drive and the WinDVD® software. See the help file that comes with the WinDVD software for details.

- To achieve optimum performance when playing DVDs, it is recommended that your notebook not be connected to the port replicator while playing

DVD movies or using DVD applications. Close any open applications before playing a DVD movie.

- When playing DVD movies on battery power, set the power management profile to DVD. With other profiles, the movies are choppy. As an alternative, you can set the power management profile to Automatic Profile Selection, which will cause the DVD profile to be selected automatically whenever you insert a DVD. See "Controlling Power Management" for information on how to set the power management profile.

Notes on CD and DVD media

- Do not switch the power saving modes while you are playing the DVD disc.
- Disable the screen saver and the virus checker (if it is active).
- Do not use memory-resident utility software to speed up disc access. This may cause the notebook to malfunction.
- Do not drop or bend the disc.
- Do not touch the surface of the disc. Fingerprints and dust on the surface of a disc may cause data errors. Proper care of the disc is essential to maintain its reliability. Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray, as they may cause damage to the disc.
- For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
- If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry soft cloth.

When using your notebook to play DVDs on your TV

- If you connect a TV to your notebook to play DVDs, see "Selecting the Display Mode" for instructions.
- The screen resolution must be set to 640 x 480 dots in order to play a DVD while using the TV Out jack. See "Connecting a TV Display" for more information.

To write data to a CD-RW or CD-R disc*

You can use Sony SonicStage and Microsoft® Windows® XP to write data to a CD-R or CD-RW disc. To create a CD-R disc that is readable in a CD-ROM drive, make sure you finish the writing process before ejecting it. For more information, see the instructions included with Windows® XP.

- For optimal writing speed, deactivate the screen saver and exit anti-virus software before writing data to a disc.
- For best results, use CD-Rs that are compatible with 8x speed.
- Do not put your notebook into power saving mode while writing data to a CD-R or CD-RW disc.

Do not strike or shake the notebook while writing data to a disc.

Memory-resident disc utilities, such as the screen saver and virus checker, may cause unstable operation or data loss. Deactivate these utilities before writing data to a disc.

Always use the AC adapter as the power source for your notebook when you are writing data to a CD-R or CD-RW. Using battery power may result in data transfer failure.

* For notebook models equipped with a CD-RW/DVD Combo Drive.

Using PC Cards

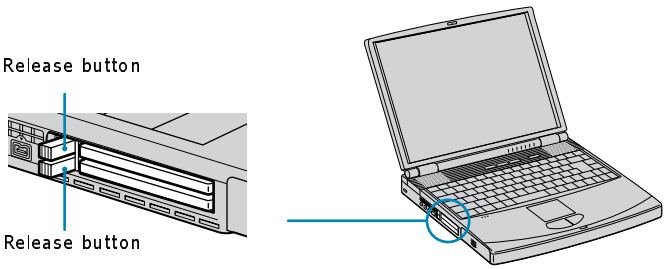
Your notebook includes two PC Card slots. PC Cards enable you to connect portable external devices such as another hard disk drive, or to connect to a network.

The PC Card slots can accommodate two Type I/II PC Cards, or one Type III PC Card. These slots are compatible with CardBus. Use the lower slot for Type III PC Cards. You do not need to shut down your notebook before inserting or removing a PC Card.

To insert a PC card

1 Push the Release button. The Release button pops out.

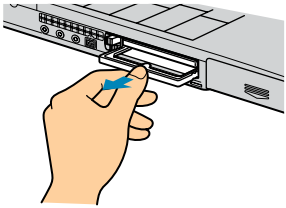
PC Card release button



2 Press the Release button a second time. The PC Card slot protector pops out.

✍ When you use a Type III PC Card, you need to remove both the top and bottom PC Card slot protectors.

PC Card slot protector

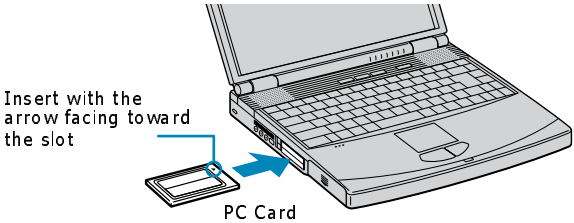


3 Insert the PC Card into the PC Card slot.

4 Verify that the front label of the PC Card is facing up.

5 Push the PC Card slot gently into the port. Your system automatically detects the PC Card. The Unplug or Eject Hardware icon appears in the taskbar.

Inserting a PC Card



Do not force a PC Card into the slot as this may damage the connector pins.

Touching the head of the PC Card will not cause damage to the connector pins, but damage can occur if the head of the PC Card is sticking out of the notebook while the unit is being transported.

To remove a PC Card

If your notebook is turned off, you do not have to follow these instructions.

1. Double-click in the taskbar. The “Safely remove ... PC Card” dialog box appears.
2. Click the dialog box. The message, “Safe to Remove Hardware” appears.
3. Click to close the message.
4. Push the Release button. The Release button pops out.
5. Push the Release button a second time. The PC Card pops out.
6. Gently grasp the card and pull it out of the slot.
7. Insert the PC Card slot protector into the empty slot.

Notes on PC Cards

- For some PC Cards, if you alternate between normal power operation and the Standby or Hibernate power management modes while the card is inserted, you may find that a device connected to your system is not recognized. Reboot your system to correct the problem.
- Some PC Cards may require that you disable idle devices when using the PC Card. You can use Sony Notebook Setup to disable devices. See “Displaying the Sony Notebook Setup Screen” for more information.
- Be sure to use the most recent software driver provided by the PC Card manufacturer.
- If an exclamation mark (!) appears on the Device Manager tab in the System Properties dialog box, remove the software driver and then reinstall it.
- You may not be able to use some PC Cards or some functions of the PC Card with this notebook. If you have difficulty inserting a card, check that you are orienting the card correctly. See the manual that came with your PC Card for more information on use.

Using a Second Battery Pack

You can purchase a second rechargeable battery pack. With two battery packs, you can extend the time that you use your notebook with battery power. When using two battery packs, the battery pack you insert first charges first. The second battery pack you insert charges when the first battery pack is 85 percent full. You can monitor which battery pack is charging by observing the battery indicators.

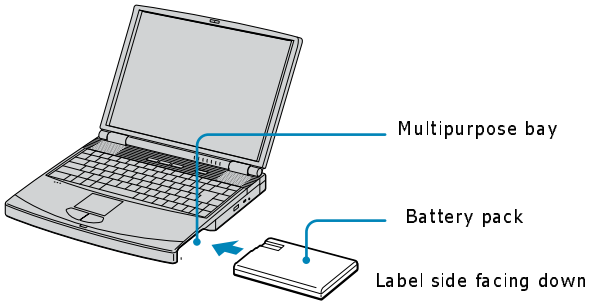
To insert a second battery pack

1 If another device is in the multipurpose bay, remove the device.

2 Insert the battery pack into the multipurpose bay.

✍ If the battery is being used, the battery 2 indicator turns on.

Second battery in multipurpose bay

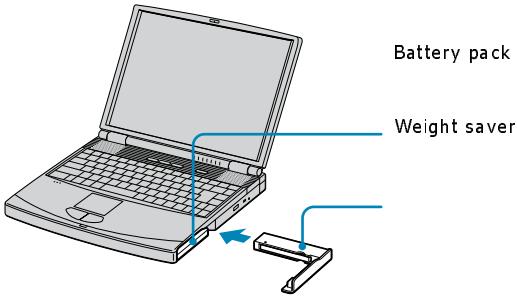


3 Attach the weight saver to the notebook to stabilize the battery pack.

4 Locate the release lever on the bottom of the weight saver.

5 Slide the lever toward the front of the notebook to lock the weight saver. See also “Using the Weight Saver” for more information.

Using weight saver for second battery cover



To charge the second battery pack

Keep the battery pack in the notebook while it is connected to AC power. The battery automatically charges as long as the notebook is connected to AC power and turned on. The battery indicator flashes while the battery is charging.

To charge the battery pack

1 Connect the AC adapter to the notebook.

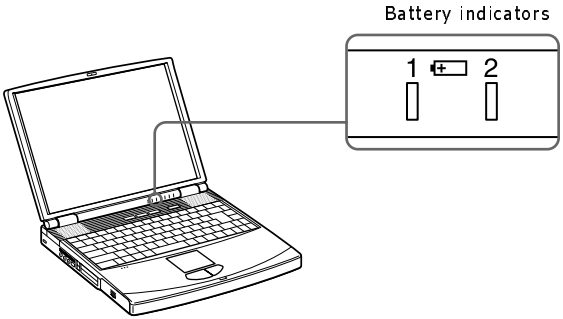
2 Insert the battery pack.

The notebook automatically charges the battery. The battery indicator flashes in a double-blink pattern as the battery charges.

3 When the battery is 85 percent full, the battery indicator turns off.

✍ To charge the battery completely, continue charging for an additional hour. See "Displaying Battery Information" for more information.

Charging the second battery



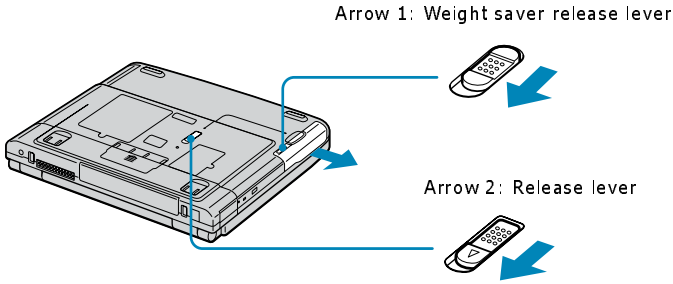
✍ To determine the amount of time the battery lasts, see “Displaying Battery Information” for more information.

To remove the second battery pack

If you attach two battery packs, you can remove either of them without shutting down the notebook.

1. When removing one battery pack, verify that the other battery pack’s indicator is on.
2. If the indicator of the battery pack you are removing is on, right-click the battery icon on the task tray and click the “Switch discharge battery” option.
3. Locate the release lever on the bottom of the weight saver.
4. Slide the lever in the direction of arrow 1, then slide the release lever on the bottom of the notebook in the direction of arrow 2.

Multipurpose bay release levers



5 Remove the weight saver, and then pull out the battery pack.

6 Reinsert the weight saver. See “Using the Weight Saver” for more information.

Using the Weight Saver

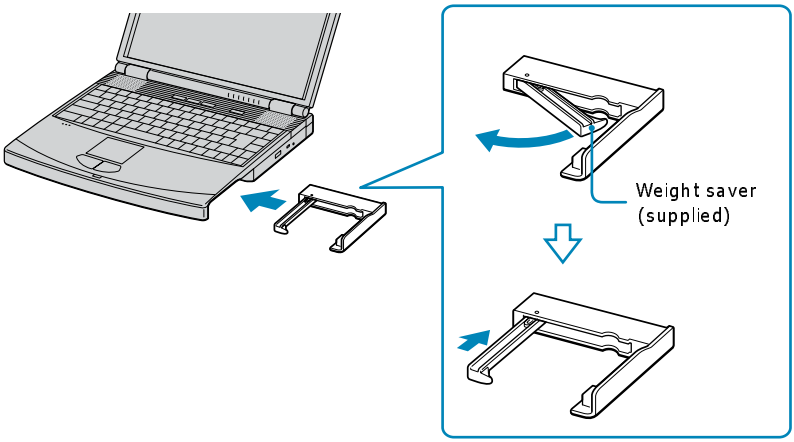
The weight saver protects the multipurpose bay when it is empty.

To attach the weight saver

1 If another device is in the multipurpose bay, remove the device. See "To remove the second battery pack" for more information.

2 Fold out the hinged arm of the weight saver and then push on the hinged arm to lock it into place. Slide the weight saver in the direction of the arrow until it clicks.

Attaching the weight saver



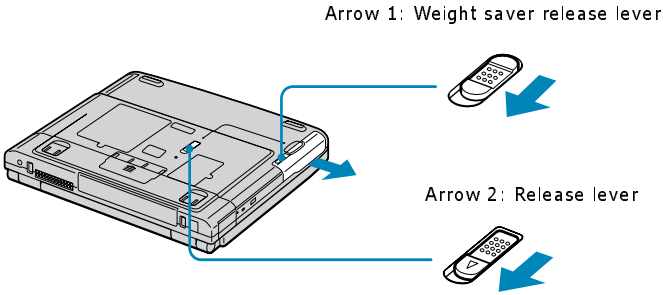
3 Manually lock the weight saver's release lever.

To remove the weight saver

1 Locate the release lever on the bottom of the weight saver.

2 Slide this lever in the direction of arrow 1, then slide the release lever on the bottom of the notebook in the direction of arrow 2.

Multipurpose bay release levers



3 After removing the weight saver, pull out the weight saver's hinged arm and fold it into the weight saver.

Using Power Saving Modes

When you use a battery as the source of power for your notebook, you can take advantage of power management settings to conserve battery life. In addition to the normal operating mode, which allows you to turn off specific devices, your notebook has two distinct power saving modes: Standby and Hibernate. When using battery power, be aware that the notebook automatically enters Hibernate mode when the remaining battery charge drops below 5 percent, regardless of the power management setting you select.

✍ If the battery level falls below 10 percent, you should either attach the AC adapter to recharge the battery or shut down your notebook and insert a fully charged battery.

Normal mode

Normal mode is the normal state of your notebook when it is in use. The power indicator displays green when your notebook is in this mode. To save power, you can turn off a specific device such as the LCD or the hard disk drive.

Standby mode

In Standby Mode the notebook saves the current state of the system in RAM and switches off power to the CPU. The amber power indicator flashes in this mode.

To activate Standby mode

1 Press the key combination Fn+Esc. You can also use the PowerPanel™ utility to enter Standby mode.

2 Press any key to return to normal mode.

Hibernate mode

In the Hibernate mode, the state of the system is saved on the hard drive and power is turned off. The power indicator is off in this mode.

To activate Hibernate mode

1 To activate Hibernate mode, press the key combination Fn+F12, or press the power button and release it immediately. The "Save to Disk Manager" screen appears and the notebook enters Hibernate mode.

✍ Do not move the notebook until its power indicator turns off.

2 Press on the power button to return to normal mode.

Notes on power saving modes

- When returning from Hibernate mode, the system status stored on the hard disk is erased and the notebook starts normally if you press the power button and hold it for more than four seconds.
- Standby uses more power than Hibernate.
- Standby requires less time than Hibernate to return to normal mode.

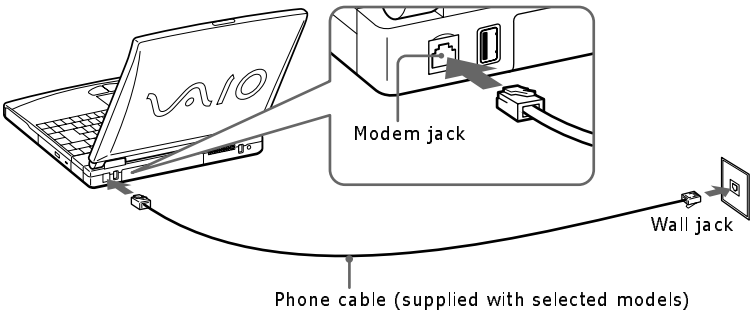
Connecting a Phone Line

You need to connect a phone cable (supplied with selected models) to take advantage of online services and the Internet.

✍ In order to register your Sony VAIO® Notebook, register your software online, and use Sony Customer Support, you must connect to a phone line.

1 Plug one end of the phone cable into the modem jack on the notebook.

Connecting phone cable



2 Plug the other end into the wall jack.

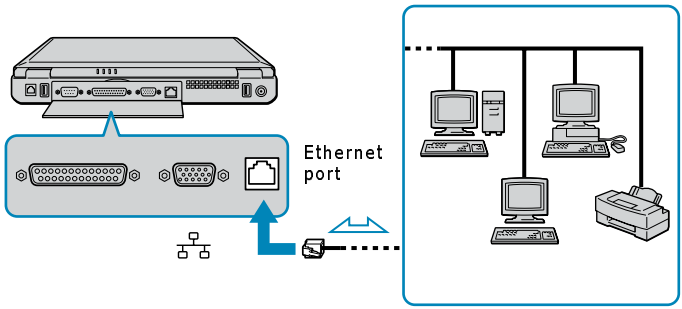
✍ Your notebook does not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple phone lines or a private branch exchange (PBX). Some of these connections may result in excess electrical current and could cause a malfunction in the internal modem.

If you connect a phone line coming through a splitter, the modem or connected device may not work properly.

Connecting to a LAN

You can connect your notebook to 10BASE-T and 100BASE-TX-type Local Area Networks (LANs). For the detailed settings and devices needed to connect to the network, ask your network administrator.

Connecting to LAN



Warning: Only connect 10BASE-T and 100BASE-TX cables to the Ethernet port. Do not connect any other type of network cable or any telephone line. Connecting cables other than those listed above may result in an electric current overload and could cause a malfunction, excessive heat, or fire in the port. To connect the unit to the network, contact your network administrator.

If you enable Wake on LAN, the power saving mode will be switched to Standby mode.

To set up your ethernet connection

To connect to the network

1. Click Start, select My Computer, and click My Network Places under the Other Places header.
2. Click “Add a network place” under the Network Tasks header, or click “Set up a home or small office network,” depending on your configuration.
3. Depending on your choice, either the The Add Network Place Wizard or Network Setup Wizard is displayed.

4 Follow the step-by-step instructions that appear on the screen.

Connecting Peripheral Devices

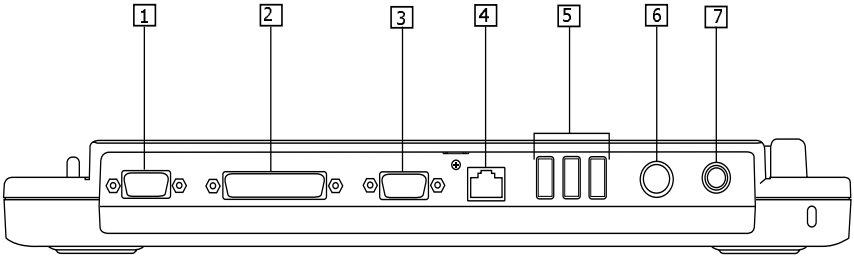
You can add functionality to your notebook by connecting a variety of peripherals, as discussed in the following sections:

- Connecting a Port Replicator
- Connecting an External Mouse or Keyboard
- Connecting a Parallel Port Printer
- Connecting a USB Printer
- Connecting an External Display
- Connecting a TV Display
- Connecting a USB Device
- Connecting an i.LINK Device
- Connecting VAIO computers
- Connecting External Speakers
- Connecting an External Microphone
- Expanding Your Notebook Capabilities

Connecting a Port Replicator

Your notebook supports the use of an optional port replicator (such as the Sony PCGA-PRFX1 model). Attaching a port replicator enables you to connect additional peripherals to your notebook.

Port replicator



1	Serial port	**5**	USB ports
2	Printer port	**6**	/ Mouse/Keyboard (PS/2 port)
3	Monitor port	**7**	DC In jack
4	Network (Ethernet 10BASE-T) port		

The port replicator can be powered only with an AC power adapter. Do not remove the AC adapter from the port replicator or the AC outlet while using the port replicator; this may cause data damage or hardware malfunctions.

To attach your notebook to the port replicator

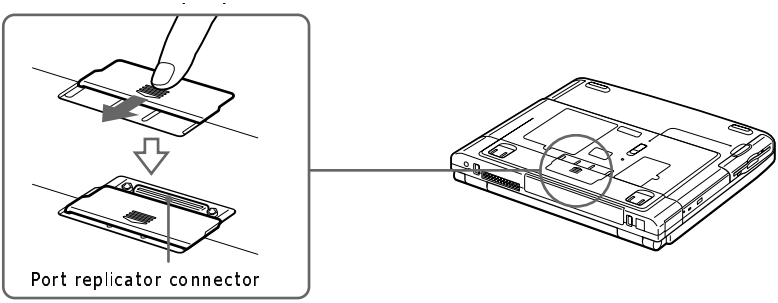
To supply power to your notebook while it is connected to the port replicator, you can connect the AC adapter directly to the port replicator.

When attaching your notebook to the port replicator, do not attempt to insert or remove the battery pack. Lifting and turning the notebook with an attached port replicator could cause a temporary loss of power, and may result in data loss.

1 Turn off your notebook and disconnect all peripheral devices.

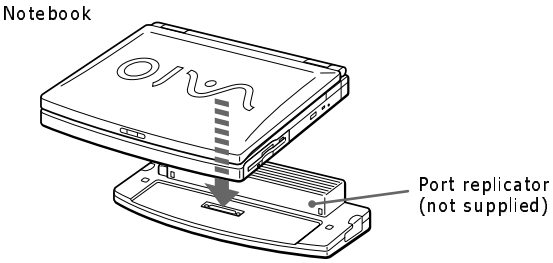
2 On the bottom of the notebook, slide the port replicator connector cover open.

Port replicator connector



3 Attach the bottom of the notebook to the port replicator connector until it clicks.

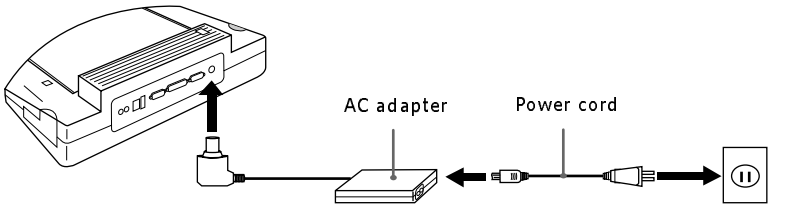
Attaching notebook to port replicator



4 Plug the cable attached to the AC adapter into the **DC IN** jack on the port replicator.

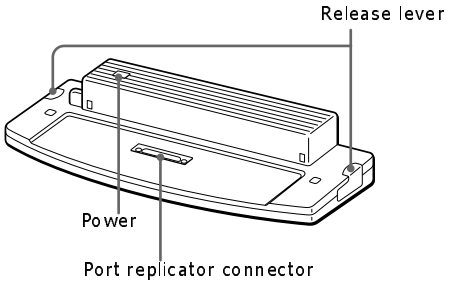
5 Plug the power cord into the AC adapter and an AC outlet. The power indicator turns green.

Connecting AC adapter to port replicator



✍ Use the AC adapter that comes with your notebook, or an optional Sony adapter.

Power indicator



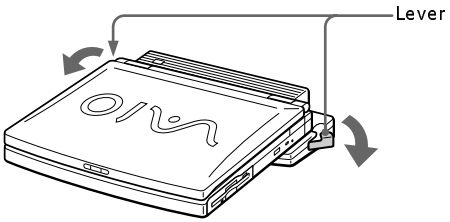
6 Turn on the notebook.

To remove your notebook from the port replicator

1 Turn off your notebook and the connected peripherals.

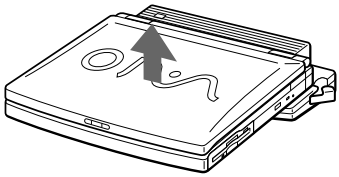
2 Pull the levers on each side of the port replicator to disengage the notebook from the port replicator.

Disengaging notebook from port replicator



3 Lift the notebook away from the port replicator.

Lifting notebook



4 Close the port replicator connector cover on the bottom of your notebook.

Close the port replicator connector cover after removing your notebook from the port replicator. If the cover is left open, dirt may get inside and damage the notebook.

Connecting an External Mouse or Keyboard

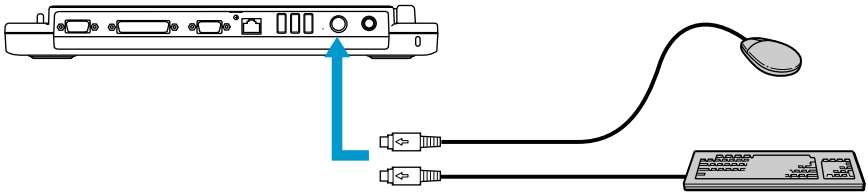
You can connect an external mouse or keyboard to the optional port replicator using a similar type PS/2® plug or adapter. You can only connect one external device at a time. Therefore, you cannot connect both a PS/2 mouse and PS/2 keyboard simultaneously.

Before you connect or disconnect the mouse or keyboard, turn off the notebook.

To connect an external mouse or keyboard

1. Turn off your notebook.
2. Locate the mouse/keyboard port on the port replicator identified by the / symbols.
3. Plug the mouse or the keyboard cable into this port with the arrow facing up.
4. See the manual supplied with your mouse or keyboard for more information on its installation and use

Connecting external mouse or keyboard to port replicator



Connecting a Parallel Port Printer

You can connect a Windows® compatible printer to your notebook to print documents.

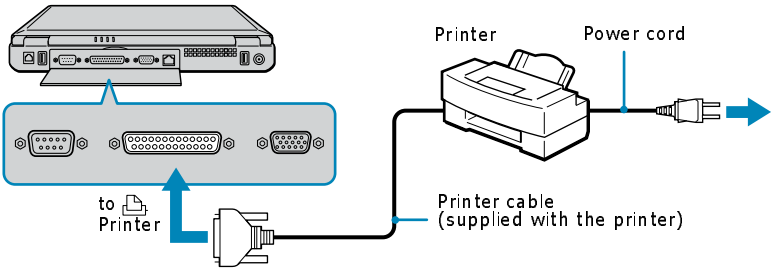
To connect a printer

1 Locate the Printer port identified by the symbol.

2 Plug the printer cable (supplied with the printer) into this port on the notebook.

3 See the manual supplied with your printer for more information on its installation and use.

Printer port



Before using the printer, you may need to change the Printer setting in the Sony Notebook Setup software. See "Displaying the Sony Notebook Setup Screen" for more information.

If your printer stops functioning after resuming from a power-saving mode, see "Troubleshooting the Printer" for more information.

Connecting a USB Printer

You can connect a Windows® compatible Universal Serial Bus (USB) printer to either of your notebook's two USB ports to print documents.

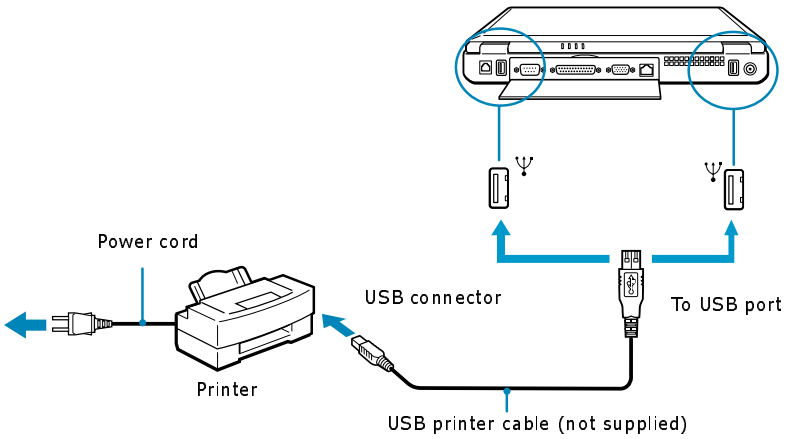
✍ To use a printer, first install the driver software supplied with your printer.

To connect a USB printer

1 Plug the optional USB printer cable into one of the two USB ports on your notebook and the USB port on your printer.

2 See the manual that came with your printer for more information on its installation and use.

Connecting a USB Printer



Connecting an External Display

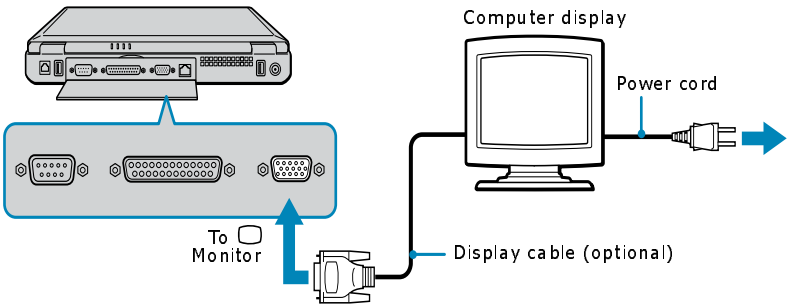
You can connect external display devices such as a computer display (monitor), multimedia computer display, and projector to your notebook.

✍ A 1400 x 1050 screen resolution and 16-bit color mode when using an external display may not be fully supported on some external displays.

To connect a computer display

1. Locate the Monitor jack identified by the ▭ symbol on the back of the notebook.
2. Plug the display cable (not supplied) into this jack.
3. If necessary, plug one end of the display power cord into the display, and the other end into an AC outlet.
4. See the manual that came with your computer display for more information on its installation and use.

Connecting an external computer display



To connect a multimedia computer display

You can connect the notebook to a multimedia computer display that includes built-in speakers and a microphone.

1 Locate the Monitor jack identified by the ▭ symbol.

2 Plug the display cable into this jack.

3 Locate the Headphone jack identified by the ∩ symbol.

4 Plug the speaker cable into this jack.

5 Locate the Microphone jack identified by the 🎤 symbol.

6 Plug the microphone cable into this jack.

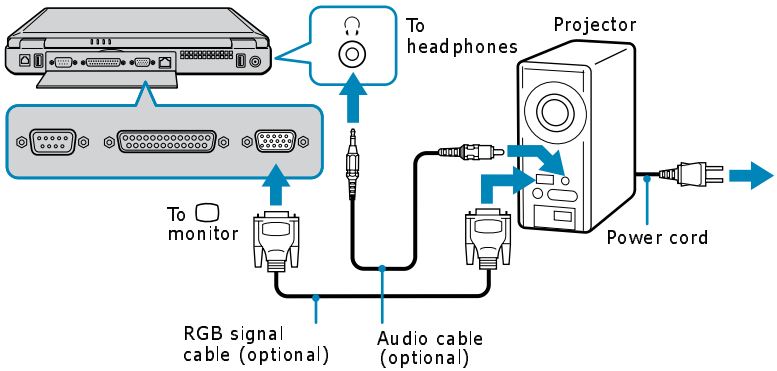
7 See the manual that came with your multimedia computer display for more information on its installation and use.

To connect a projector

You can use a projector, such as the Sony LCD Projector, as an external display.

❑ See the manual that came with your projector for more information on its installation and use.

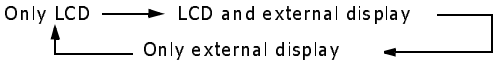
Connecting a projector



To select a display

When you connect an external display to the monitor jack, you can toggle the output between the Liquid Crystal Display (LCD), the external monitor, or both devices.

Use the Fn+F7 keys to select a display. See also "Selecting the Display Mode" for more information.

To	Press	Result
Switch to an external display	Fn+F7	Toggles between the LCD, the external display connected to the Monitor jack, or both the LCD and external display. 

Connecting a TV Display

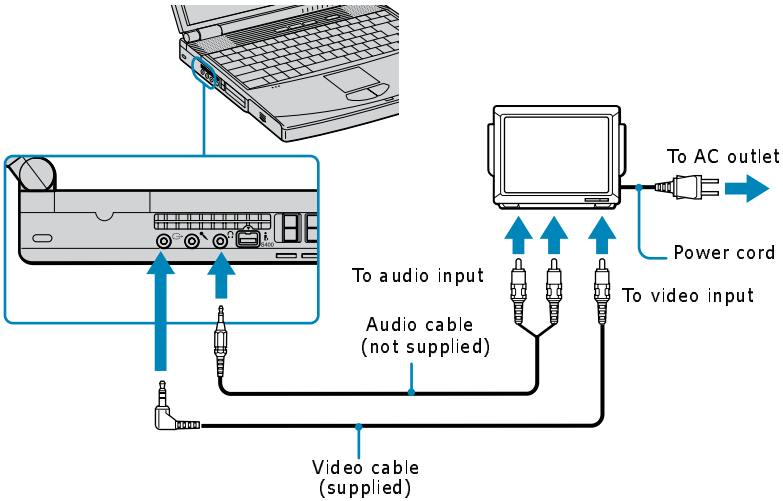
You can enjoy playing audio/video by connecting optional AV devices to your notebook. See also the manuals supplied with your AV devices for more information on their installation and use.

To connect a TV

1 Connect the notebook to a TV using audio/video cables.

2 Switch the input channel of the TV to external input.

Connecting a TV



Changing the display resolution for TV Out

Follow this procedure to change the video resolution of your display:

1 First ensure that your notebook has been started with the TV Out jack plugged in.

2 Click Start, select Control Panel, and then click the Display icon. The Display Properties dialog box appears.

3 Click on the Settings tab, and click the Advanced button. The Sony Notebook LCD Graphics Properties dialog box appears.

4 Click on the Intel® Graphics Technology tab.

5 Click on the Graphics Properties button. The Intel® Graphics Controller Properties dialog box appears.

6 Click the Television icon and choose 640 x 480 as the Screen Area display resolution.

✍ The screen resolution must be set to 640 x 480 dots in order to play a DVD while using the TV Out jack. See "Connecting a TV Display" for more information.

Notes on TV display

- TV Out does not work unless you start your notebook with the TV Out jack plugged in.
- If you insert a DVD in your optical drive to watch a video on your TV, the Fn+F8 key combination might not activate the function to toggle between your LCD and TV. Perform the following steps:

  1 Connect the TV to the notebook.

  2 Restart the notebook and wait until it finishes.

  3 Toggle between your LCD and your TV with the Fn+F8 key combination.

Your image is now displayed on both the LCD and the TV. Re-insert your DVD to launch your DVD software.

Connecting a USB Device

You can connect USB devices such as an external mouse, keyboard, speaker, and microphone to your notebook.

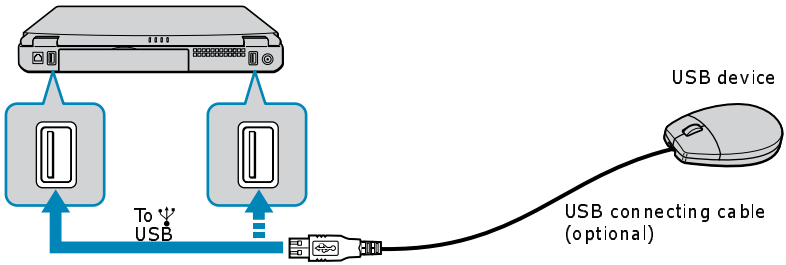
To connect a USB device

The following steps describe the procedure for connecting a USB mouse to your notebook. Use the same procedure for connecting all USB devices.

1 Locate the USB device identified by the ⚲ symbol.

2 Plug one end of the USB cable into this port and the other end into the USB device.

Connecting USB device to USB port



You can use an optional Sony USB mouse such as the PCGA-UMS1 series (not supplied) with this notebook. Since the USB mouse software driver is preinstalled in the notebook, you simply plug the USB mouse into the USB port to use it. One USB port supports one USB device.

See the manual supplied with your USB device for more information on its installation and use.

Connecting an i.LINK Device

Your VAIO® Notebook includes an i.LINK®* S400 (IEEE1394) port, which you can use to connect a compatible i.LINK device, such as an i.LINK enabled digital video camera recorder. See the manual supplied with your digital video camera recorder for more information on its installation and use.

✍ You can purchase compatible i.LINK cables from your local retailer, through the Sony VAIO® Direct Web site (http://www.sonystyle.com/vaio), or by calling 1-888-315-7669 (toll free).

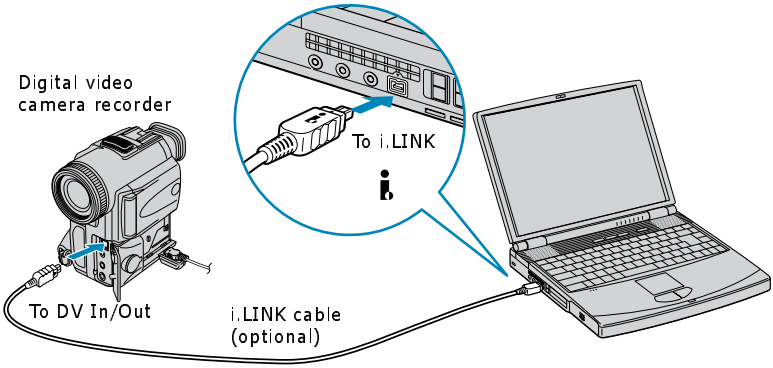
To connect a digital video camera recorder

1 Plug one end of the i.LINK cable (not supplied) into the i.LINK port on the left side of the notebook

2 Next, plug the other end into the DV In/Out port on the digital video camera recorder.

* i.LINK is a Sony trademark used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Connecting digital video camera recorder to i.LINK port



Notes on i.LINK devices

- The above figure displays a connection to a Sony digital video camera recorder; your digital video camera recorder may need to be connected differently.
- Only Sony digital video camera ports labeled “DV In/Out” or “i.LINK” are compatible i.LINK devices.
- Do not connect more than one digital video camera at a time. The software supplied with your notebook will not recognize multiple cameras.
- The i.LINK port on the notebook does not supply power to external devices. If the external device requires power from the i.LINK port, you cannot use the device with the notebook.
- The notebook supports transfer rates up to 400 Mbps; however, the actual transfer rate is the lowest transfer rate of the external device.
- The i.LINK features available may vary depending on the software applications you use. See the documentation that accompanied your software for more information.
- The i.LINK cables compatible with your VAIO notebook include cables with the following part numbers: VMC-IL4415 (a 1.5-meter cable with a 4-pin connector at each end), VMC-IL4615 (a 1.5 meter-cable with a 4-pin

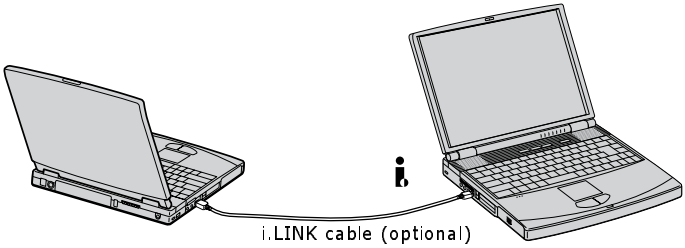
connector at one end and a 6-pin connector at the other), and VMC-IL4408A (a 0.8-meter cable with a 4-pin connector at each end). You can purchase these cables from your local retailer, through the Sony VAIO® Direct Web site (http://www.sonydirect.com), or by calling 1-888-315-7669 (toll free).

Connecting VAIO computers

Connecting with i.LINK

You can use an optional i.LINK®* cable to connect your VAIO® notebook to another VAIO computer that has the preinstalled Microsoft® Windows® operating system or the Sony Smart Connect software preinstalled. You may use an i.LINK cable (not supplied) to connect the two systems and then use one computer to edit, copy, or delete files on the other computer. You can also print from a printer that is attached to either computer.

Connecting with an i.LINK cable



✍ When you connect two VAIO computers, you must assign each computer a unique name. The computers can be identified by this unique name when the two computers are networked together.

To connect VAIO computers that do not have the latest Windows® operating system, Smart Connect software may be necessary. Consult the Sony Web site for support options (http://www.sony.com/pcsupport).

* i.LINK is a Sony trademark used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Connecting External Speakers

You can enhance the sound quality of your notebook by connecting external speakers. See the manual that accompanied your speakers for more information on their installation and use.

> ⚠ **Do not place floppy disks on the speakers; the speakers' magnetic field may damage the data on the floppy disks.**

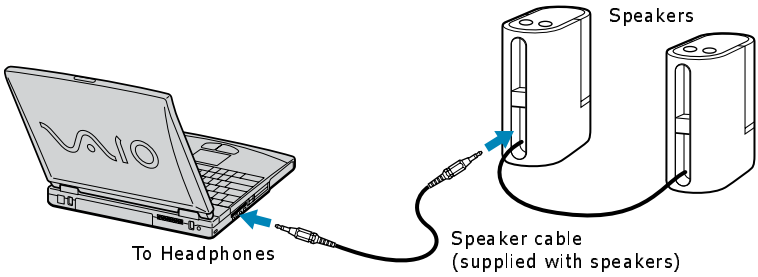
Before connecting your external speakers

- ❑ Verify your speakers are designed for computer use.
- ❑ Turn down the volume of the speakers before you turn them on.

To connect external speakers

1. Locate the Headphone jack identified by the ∩ symbol on the side of the notebook.
2. Plug the speaker cable into this jack.

Connecting speakers to the headphone jack



Connecting an External Microphone

You can enhance the quality of sound input by using an external microphone. See the manual that accompanied your microphone for more information on its installation and use.

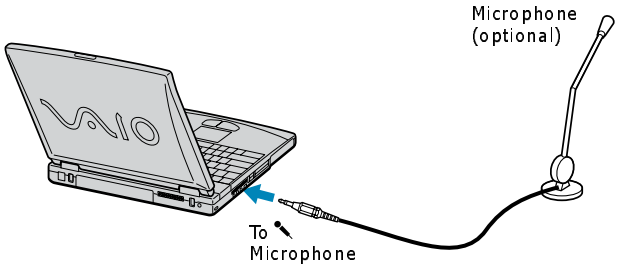
✍ Verify that your microphone is designed for computer use. The microphone should be compliant with the plug-in power microphone.

To connect an external microphone

1 Locate the Microphone jack identified by the 🎤 symbol on the side of the notebook.

2 Plug the microphone cable into this jack.

Connecting microphone to microphone jack



Expanding Your Notebook Capabilities

A Personal Digital Assistant (PDA), Wireless LAN Access Point, and Wireless LAN PC Card peripheral device can be connected to your notebook, to expand the capabilities of your computer and enhance its versatility to meet your various business or personal needs.

Personal Digital Assistant

A handheld PDA is the quintessential personal planner and entertainment center that fits in your pocket. With a PDA, you can easily perform the following functions:

- Enter your schedule details in the calendar and view them by the day, week, or month, and even set an alarm to remind you of important events.
- Keep your contact names, addresses, phone numbers, and other details in the address book, and find them when you need them.
- Add tasks to the To Do List, prioritize them, and assign them due dates.
- Synchronize your data with the software on your notebook, to back up your data.
- Track expenses when you are out of the office, then transfer the data to your notebook.
- Exchange data with your notebook.

Wireless LAN Access Point

The Wireless LAN Access Point, which is also called the Access Point, is designed for building a wireless Local Area Network (LAN) environment. The Access Point comes with the Wireless LAN PC Card and required software. You can easily build a wireless LAN environment by plugging the Access Point into an AC power outlet, installing the Wireless LAN PC Card in your notebook, and using the provided software. Because a wireless LAN configuration requires no wiring, you can operate multiple computers more freely than ever before.

You can also connect your Access Point to a telephone line, Integrated Services Digital Network (ISDN) router, cable modem, or Digital Subscriber Line (xDSL) modem to share access to the Internet among multiple computers.

Wireless LAN PC Card

The Wireless LAN PC Card, which comes with the Wireless LAN Access Point, can be purchased separately and is designed for building a wireless LAN environment. The Wireless LAN PC Card can be used with or without the Access Point. With the Access Point, you can build a wireless LAN between computers that are equipped with the Wireless LAN PC Card and gain access to the Internet. Without the Access Point, you can achieve direct communication (Peer to Peer mode) between computers.

✍ For information on available Sony products, go to: http://www.sonystyle.com/wirelesslan.

Customizing Your VAIO Notebook

The following sections briefly describe how to change your notebook's default settings:

- ❑ Displaying the Sony Notebook Setup Screen
- ❑ Controlling Power Management
- ❑ Displaying Battery Information
- ❑ Selecting the Display Mode

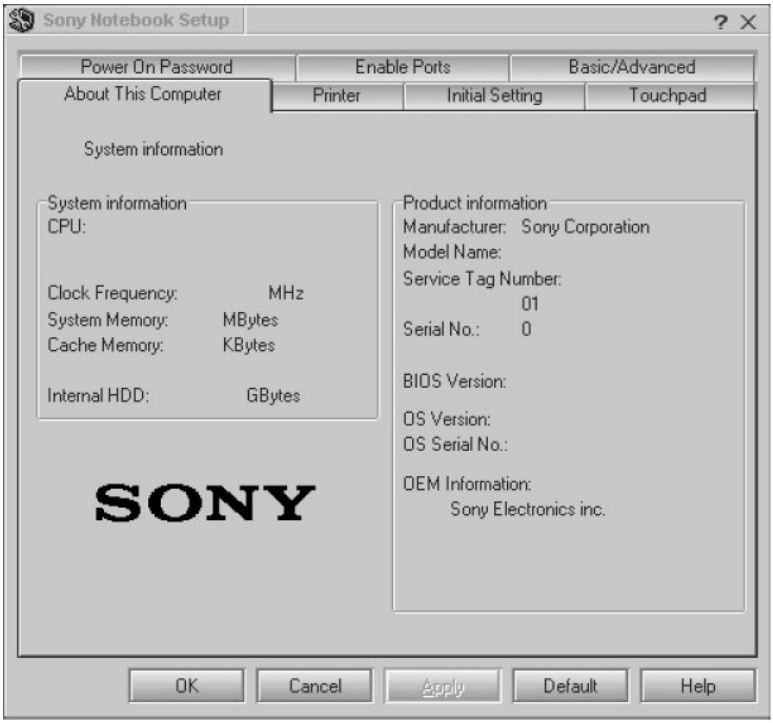
Displaying the Sony Notebook Setup Screen

To display the Sony Notebook Setup screen

1 Click the Start button on the Windows® taskbar.

2 Point to All Programs, select Sony Notebook Setup, and click Sony Notebook Setup.

Sony Notebook Setup Screen



3 Select the tab for the item you want to change. See “Sony Notebook Setup Tabs” for more information.

4 After you finish making your changes, click OK.

Sony Notebook Setup Tabs

Tab	Description
About This Computer	Display system information, including memory capacity, serial number, and BIOS version.
Printer	Select printer port mode settings.
Initial Setting	Change the volume of the sounds that play while the operating system is loading. Select the order of drives and devices from which you want to load the operating system. You can specify the hard drive as well as other drives inserted into your notebook.
Touchpad	When you connect an optional mouse to your notebook, you can make your touchpad inactive. You can also customize the settings of your mouse using the mouse utility.
Power On Password	Set the password to secure your notebook.
Enable Ports	Enable or disable ports. Disabling ports releases resources to the system. To change the serial settings, click Advanced on the Basic/Advanced tab.
Basic/Advanced	Switch between Advanced mode (additional screens with advanced settings) and Basic mode of display.

✍ For more information about each option, click Help on the Sony Notebook Setup screen to display the help file.

Controlling Power Management

The PowerPanel™ utility allows you to control the power management of your notebook and provides key information about system activity and battery life. The following sections briefly describe how to conserve your notebook's battery power. You can also refer to PowerPanel Help for more detailed information. To activate a profile or command, see "Displaying Battery Information" for more information.

To view the Power Management status icons

The Power Management status icons are displayed in the task tray at the lower right side of your screen. Move the pointer over the icons to see the tool tip that displays information about the active profile. The CPU status icon indicates the performance level of the CPU.

To activate the Power Management Toolbar

1. Right-click on the taskbar at the bottom of the screen.
2. Select Toolbars from the pop-up menu, and then click Power Management. The Power Management toolbar appears on the taskbar.

The current profile icon is highlighted on the Power Management toolbar. It is the first icon farthest to the left, and its appearance changes depending on which power management profile is currently selected. To change the power management profile, click the current profile icon, and then select a profile from the pop-up list. See "Power Management profiles" for a description of available options. To select another power management profile, click that icon in the Power Management toolbar.

✍ When you use the battery pack to power your notebook, your system selects the Maximum Battery Life power management profile by default. If you select a different power management profile while using battery power, that profile is selected automatically the next time you use the battery pack to power your notebook.

Refer to PowerPanel Help for information on customizing the Power Management toolbars.

You can change the power management settings, such as the system timer and the brightness of the screen.

To customize Power Management settings

1. Click the Current Profile icon on the Power Management toolbar.
2. Select Edit/Create Profiles from the menu.
3. Click a profile whose setting you want to change from the list in the left field.
4. Double-click an item whose setting you want to change from the list in the right field.
5. Click the desired setting.
6. Click the File menu, and then click Save.
7. Click the File menu, and then click Exit.

Power Management profiles

The PowerPanel utility provides several predefined Power Management profiles. Each profile consists of a group of Power Management settings that are designed to meet specific Power Management goals—ranging from maximum Power Management to no Power Management. You can change the settings for any of the predefined profiles (except for the Disable Power Management profile), or you can create your own profile to suit your portable computing needs. The predefined profiles are:

Icon	Description
	Maximum Performance Provides the best system performance while still conserving power.
	Maximum Battery Life Provides power saving features to give you maximum battery life and good performance. It slows the notebook and puts it into Standby mode after a specified time period.
	Disable Power Management Turns off all power management features such as Standby and Hibernate modes. You can not change the settings of this profile.

Icon	Description
	AC Power The power management state when AC power is in use. Similar to the Power Management Off setting. Power Management automatically loads the AC profile unless you disable this feature.
	Games Disables the display and the Hard Disk Standby timer.
	Presentation Keeps the display on at all times while it conserves power. This option is ideal for slide show presentations. You can establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.
	Camera Optimizes performance and power requirements for camera usage.
	DVD Optimizes performance and power requirements for DVD usage.
	Word Processing Optimizes power management with longer timeouts on the hard disk and display screen. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.

Icon	Description
	Spreadsheet Optimizes performance and power requirements for spreadsheet applications.
	Communications Extends battery life by initiating a quick display timeout. The Internal modem remains powered. You can also establish settings for LCD (Video) Standby, Hard Disk Standby, and Standby mode to optimize power management for your system.
	Automatic Profile Selection Automatically switches to a profile suitable for active applications.

✍ Do not choose the Automatic Profile Selection when connected to AC power.

Power management commands

The PowerPanel™ utility also provides power management commands that you can use to activate specific power management functions and to control power for a specific device. You can use these commands to override a profile setting or initiate an immediate action.

Icon	Description
	Standby Puts the system into Standby mode, a power management state that saves the state of the system and peripheral devices in memory (RAM). Power consumption reduces to a minimum, and the system remains on. To return the system to the active state press any key.
	Hibernate Provides for the lowest level of power consumption. The system writes the state of the system and peripheral devices to the hard disk and turns off the system power. To return the system to the original state, use the power button to turn on power. The system saves the data in the Save to Disk Partition on the hard drive.

Conserving battery power

When using the notebook with a battery, the LCD display and the hard drive can be set to switch off automatically to conserve battery power.

See “Power Management profiles” for more information.

Displaying Battery Information

You can display information for each of the batteries in your notebook. The following sections briefly describe how to display your notebook's general battery information. Refer to PowerPanel™ Help for more detailed information.

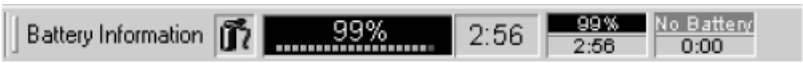
To activate the Battery Information toolbar

1 Right-click on the taskbar at the bottom of the screen.

2 Select Toolbars from the pop-up menu, then click Battery Information. The Battery Information toolbar appears on the taskbar.

To view the total capacity remaining in the battery, place the pointer over the battery status icon in the task tray on the lower right side of the screen.

Battery Information Toolbar



- **Percentage indicator —** Displays the percentage of the remaining capacity.
- **Time indicator —** Displays estimated time (hours:minutes) remaining before the battery fully drains, also known as the time-to-empty.

Battery icon descriptions

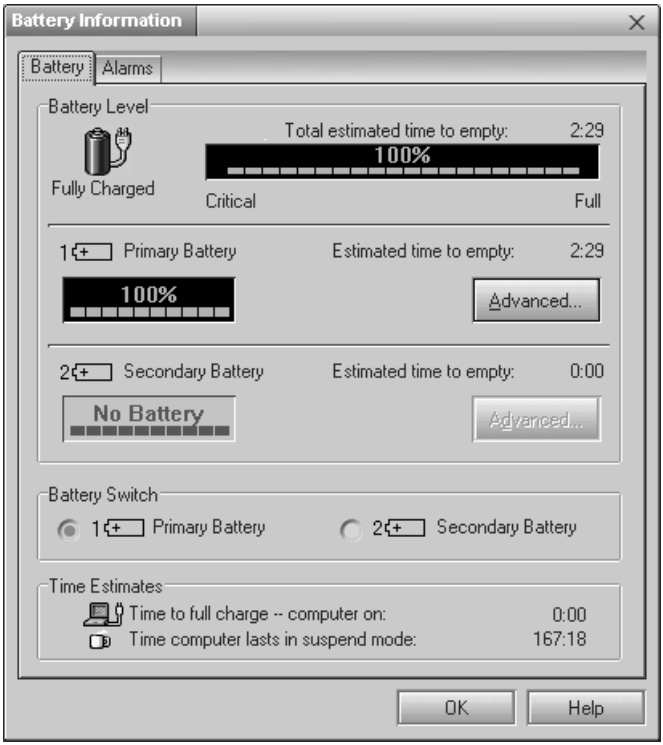
Battery icon	Battery status
	Charging

Battery icon	Battery status
	Fully charged
	Discharging
	No battery

To display detailed battery information

Double-click the battery icon on the task tray to display the Battery Information window. The screen appears displaying the Battery tab, which contains information such as the estimated time-to-empty and charging time.

Battery Information Window



To customize the Battery Information toolbar and alarm system

You can customize the Battery Information toolbar and modify the alarm settings, to suit your portable computing needs. Refer to PowerPanel™ Help for more information.

Selecting the Display Mode

This notebook uses the Intel® video controller, which enables you to select the desired display when the notebook is connected to an external monitor. When you connect an external display, you can switch the display mode between your notebook's LCD display and the external monitor.

To select the display mode

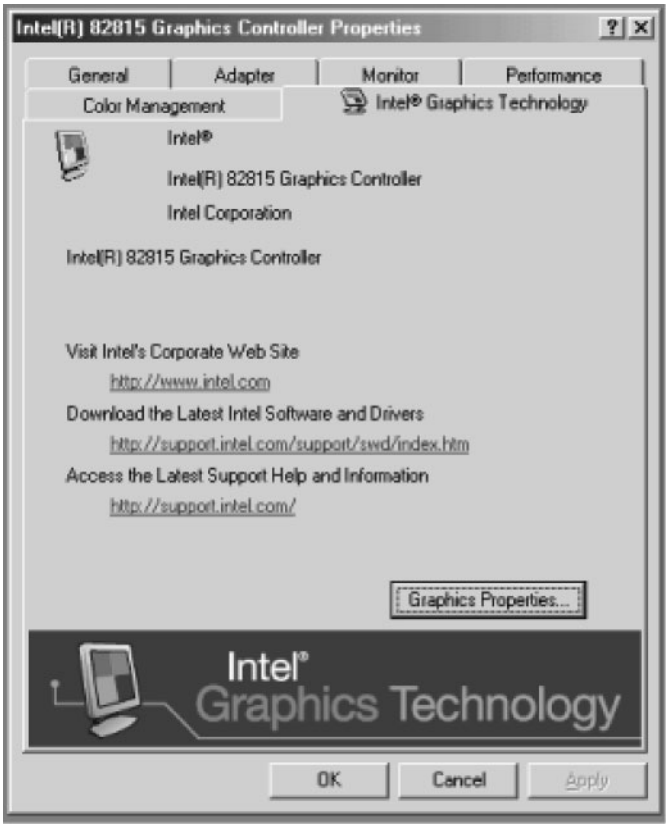
✍ See "Connecting an External Display" for more information.

1 Click Start, point to Control Panel, and click Appearance and Themes.

2 Click Display to access the Display Properties window.

3 Click the Settings tab, then click the Advanced button, to display the Intel® 82815 Graphics Controller Properties dialog box.

Intel® 82815 Graphics Controller Properties Screen



4 Click the Intel® Graphics Technology tab, then click the Graphics Properties button. If you want to use the TV as a display, deselect the Synchronous Display Mode box and click Apply. You cannot use the TV and another display simultaneously.

5 Click the Device tab.

6 Select the type of display.

✍ You may not be able to display the notebook LCD screen and an external display or projector at the same time, depending on the types of computer displays and projectors you are using.

Turn on the notebook after you turn on the peripheral devices.

To change the Window Design of Sony software

1. Click the Start button, then select Control Panel.
2. In the left window pane of Control Panel, click "Switch to Classic View."
3. Double-click UI Design Selector.
4. Click << or >> and select the desired design.
5. Click Apply. The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.
6. To try another selection, click << or >> and then click OK to close the UI Design Selector.

✍ This feature is available with UI Design Selector-compatible software only.

Adding Memory to Your VAIO Notebook

In the future you may want to install memory modules to expand the functionality of your notebook. The amount of memory on your notebook will vary depending on the model you purchased. See the Specifications flyer supplied with your notebook for the amount of memory pre-installed. Expansion memory modules are available as options. For memory upgrades, use only unbuffered PC100 (CL2) SDRAM SO-DIMM (gold lead contacts). This section describes how to replace memory modules in your computer:

- Precautions and Procedures
- Removing a Memory Module
- Installing a Memory Module
- Viewing the Amount of Memory

Precautions and Procedures

The procedures described below assume you are familiar with the general terminology associated with personal notebooks and with common safety practices required for using and modifying electronic equipment. Personal injury or equipment damage may result from failure to take these precautions.

> ⚠ **Observe the proper safety precautions when installing memory modules in your notebook. See the bulleted list below. Use care when adding memory. Mistakes made when installing or removing a memory module may cause a malfunction.**

- ❑ Disconnect your system from its power source and from any telecommunications links, networks, or modems before you open the system.
- ❑ Electrostatic discharge (ESD) can damage memory modules and other components. Perform the procedures described below only at an ESD workstation. If such a station is not available, do not work in a carpeted area, and do not handle materials that produce or hold static electricity (cellophane wrappers, for example). Ground yourself by maintaining contact with an unpainted metal portion of the chassis while performing the procedure.
- ❑ Do not open the memory module package until you are ready to install the module. The package protects the module from ESD.
- ❑ Use the special bag for preventing ESD or use aluminum foil when you store the memory module.

Typical expansion memory configuration

To determine the exact amount of memory pre-installed on your computer, refer to the Specifications flyer supplied with your computer.

✍ Depending on the specific model you purchased, a single 256 MB memory module or two 128 MB memory modules may be preinstalled.

128 MB Memory Models

Total System Memory (MB)	Slot 1 (MB)	Slot 2 (MB)
128	128	
192	128	64
256	128	128
384*	256	128
512*	256	256

* The 384 MB and 512 MB memory configurations may require the removal and replacement of original factory-installed memory modules.

256 MB Memory Models

Total System Memory (MB)	Slot 1 (MB)	Slot 2 (MB)
256	256	
384	256	128
512*	256	256

* The 384 MB and 512 MB memory configurations may require the removal and replacement of original factory-installed memory modules.

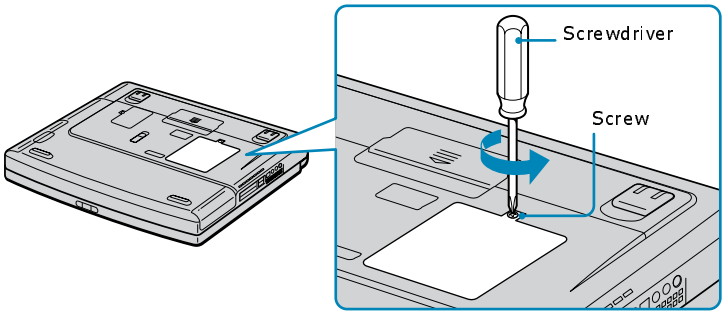
Removing a Memory Module

1 Shut down your notebook and disconnect all peripheral devices, such as your printer.

2 Unplug the notebook and remove the battery pack(s).

3 After the notebook has cooled, loosen and remove the screw that secures the cover of the memory bay on the bottom of your notebook. Use an appropriate screwdriver.

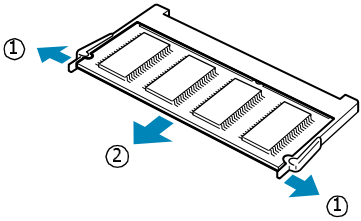
Removing the memory module cover



4 Touch a metal object (such as the connector panel on the back of your notebook) to discharge any static electricity.

5 Remove the memory module.

Removing memory module



①Pull the tabs in the direction of the arrows. The memory module is released.

②Pull the memory module in the direction of the arrow.

6 Replace the memory bay cover.

7 Tighten the screw on the memory bay cover.

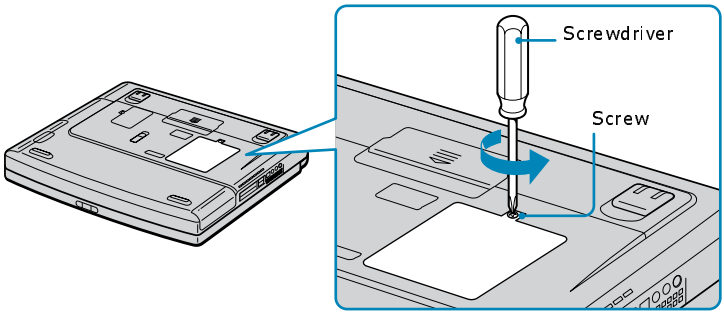
Installing a Memory Module

1 Shut down your notebook and disconnect all peripheral devices, such as your printer.

2 Unplug the notebook and remove the battery pack(s).

3 After the notebook has cooled, loosen and remove the screw that secures the cover of the memory bay on the bottom of your notebook. Use an appropriate screwdriver.

Removing the memory module cover



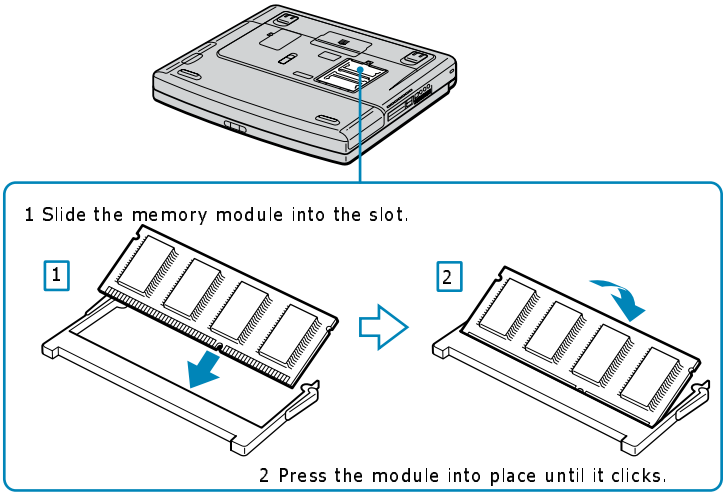
4 Touch a metal object (such as the connector panel on the back of your notebook) to discharge any static electricity.

5 Remove the memory module from its packaging.

6 Slide the memory module into the empty slot.

7 Press the module into place until it clicks.

Installing memory module



8 Replace the memory bay cover.

9 Tighten the screw on the cover of the memory bay.

Viewing the Amount of Memory

1 Restart the notebook.

2 Click Start on the Windows® task bar, select All Programs, and click “Sony Notebook Setup.” The Sony Notebook Setup screen appears.

3 Click the "About This Computer" tab to view the amount of system memory. If the additional memory is not shown, remove and reinstall the memory module.

✍ The amount of memory displayed in the Sony Notebook Setup screen is not always correct. The video adapter uses some system memory, and that amount of memory does not appear as part of the total memory shown in the Sony Notebook Setup screen.

About the Software on Your Notebook

Your VAIO® Notebook is ready to help you work, play, learn, and communicate as soon as you turn it on. This section provides the following information:

- An overview of the various software that come with your notebook and the activities you can perform with your software
- Details on your Sony application, driver, and system recovery CDs

Software Overview

Your computer may not be supplied with all of the software listed below, depending on the configuration you purchased. Preinstalled software may not be identical to retail versions, or include supporting documentation.

Adobe Acrobat® Reader
Adobe Systems Inc.
Acrobat Reader software enables you to view, navigate, and print electronic documents in Adobe Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe Photoshop® Elements (On selected models)
Adobe Systems Inc.
Using state-of-the-art image editing tools, you can unleash your artistic ability and create digital images for print, e-mail and posting to the Web. The versatile image capturing options allow you to start working with digital and traditional photos immediately. Explore endless creative possibilities for your personal images with Adobe Photoshop Elements.

Apple QuickTime™
Apple Computer, Inc.
QuickTime is the Apple technology that makes video, sound, music, 3D, and virtual reality come alive for our Internet browser and Windows.

ArcSoft PhotoPrinter® 2000 Pro
ArcSoft, Inc.
ArcSoft PhotoPrinter Pro software is an easy-to-use, yet advanced printing program that lets you quickly lay out multiple images in multiple sizes on a single sheet of paper. ArcSoft PhotoPrinter Pro software offers a wide selection of templates including landscape, portrait, free-style, mixed sizes, custom templates and more. The application includes enhancement tools and special effects for improving photos while giving you the ability to add text to any image. With ArcSoft PhotoPrinter 2000 Pro software you can create business cards, handouts, calendars, mailing labels, and much more.

Digital Print

Sony Electronics Inc.

This image management software makes it fun and easy to edit, import, and organize your digital pictures in a photo album for rich digital printing to any standard color laser or inkjet printer. Digital Print can also be used to make custom CD labels for your audio CDs.

DVgate™

Sony Electronics Inc.

Connect a compatible digital video camera recorder to the i.LINK®* connector and capture your own video clips and still images. You can edit clips from your video, add others, and combine clips into new movie segments. You can also save your images in a variety of popular file formats.

Microsoft® Internet Explorer

Microsoft Corp.

Internet Explorer delivers the Web the way you want it. It is safe, easy to use, and you can personalize how you access the Web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the Web.

Microsoft® Office XP Professional (On selected models)

Microsoft Corp.

Microsoft Office XP redefines the relationship between people and software by providing a smarter, simpler way of working. New Office XP features include context-sensitive smart tags, enhanced formatting options, and more, that enable you to continually integrate additional services into Office and access information anytime.

* i.LINK is a Sony trademark used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Microsoft® Office XP Small Business (On selected models)
Microsoft Corp.
With Microsoft Office XP you'll find a powerful new technology that will help you get work done more quickly by providing real-time, context-sensitive options for important actions, from formatting to error correction. Task panes consolidate important tasks into a single integrated view, enabling you to conduct searches, launch and format documents, and view the contents of your Clipboard from one location.

Microsoft® Word
Microsoft Corp.
Microsoft Word makes it easy to create shared Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word also extends that ease-of-use to international users, making it simple to create multilingual documents.

MovieShaker™
Sony Electronics Inc.
Sony's original MovieShaker software creates personal movies that have transitions, background music and text. Just import your video clips and "shake" with a click of the mouse. Your personal movies are easy to create and fun to share with family and friends.

PC-Cillin®
Trend Micro, Inc.
PC-Cillin provides portable, easy-to-use, real-time antivirus security at your computer's entry point (beaming, synchronization, Internet access) to defend against potential threats hidden inside files, e-mail, or on the Web.

PictureGear™
Sony Electronics Inc.
This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Quicken®

Intuit Inc.

Quicken is a fast, easy way to organize your finances. Quicken works just like your checkbook, so it is easy to learn and use. Quicken manages all your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

RealJukebox

Real Networks Inc.

RealJukebox is one of the world's most widely used personal music management systems. Using RealJukebox, you can capture the contents of a music CD, manage and play back your music, and view various music-related information via the Internet. This Custom RealJukebox for Sony allows seamless check-out capabilities to a wide range of Sony personal audio devices, and offers convenient links to Sony product and music service home pages.

✍ If you are using an external CD-ROM drive connected with a PC Card, be sure to connect your external CD-ROM drive before starting RealJukebox. Additionally, do not remove your CD-ROM drive while using RealJukebox. Either of these actions may cause RealJukebox to shut down improperly.

RealPlayer®

Real Networks Inc.

RealPlayer is the RealNetworks video and audio player which lets you access 2,500 radio stations featuring music, news and sports.

Smart Capture

Sony Electronics Inc.

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK® connection between your computer and a Sony Digital Handycam® Camcorder that supports the i.LINK interface. It allows you to capture compressed video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video and network convergence.

SonicStage
Sony Electronics Inc.
This new jukebox application adds a host of new features to its predecessor, OpenMG™ Jukebox. Continuing to take advantage of Sony's copyright-protected ATRAC3™ format for high-quality digital audio storage, SonicStage sports a new Music Visualizer, a sleek new player skin design, audio CD burning capability, and a parametric equalizer for fine-tuning audio playback.

Sony on Yahoo!
Yahoo! Inc.
Personalize your own web portal with Sony on Yahoo! Get a free webmail account, customized news and local weather reports, comics, and more.

SonyStyle Connect℠
Sony Electronics Inc.
SonyStyle Connect provides excellent dial-up, as well as DSL, Internet connection services. To find out which plan is best for you, visit http://www.sonystyleconnect.com and find out what is available in your area.

VAIO Action Setup
Sony Electronics Inc.
VAIO Action Setup manages the settings for your notebook's Shortcut keys and i.LINK interface.

VAIO Support Agent
Sony Electronics Inc.
VAIO Support Agent provides immediate, interactive online support.

VisualFlow™
Sony Electronics Inc.
VisualFlow software is a state-of-the-art Sony multimedia browser designed specifically for Memory Stick® media. It displays any still picture, movie, or sound file stored in a Memory Stick® media in a visually pleasing, artistic manner. VisualFlow software not only plays a selected movie or sound file, but also enables playback of files by other applications such as PictureGear™, Memory Stick Slideshow, and Windows® Explorer.

WinDVD®

InterVideo Inc.

WinDVD is a simple-to-use DVD player including all the features you would expect to find in a standard consumer DVD player, while also offering advanced display and navigation features such as zoom, pan, bookmark, and time search.

Application, Driver, and System Recovery CDs

Your notebook comes with the following application, driver, and system recovery CDs. To use your recovery CDs, see "Using Your Recovery CDs" for more information.

Application Recovery CD(s)
Sony Electronics Inc.
This CD enables you to reinstall individual applications if they become corrupted or are erased.

Driver Recovery CD(s)
Sony Electronics Inc.
This CD enables you to reinstall individual device drivers if they become corrupted or are erased.

System Recovery CD(s)
Sony Electronics Inc.
This CD enables you to format the C:\ partition of the hard disk drive, then reinstall the operating system and software titles that shipped with your notebook, if they become corrupted or are erased. Use it to restore the hard disk of the VAIO® Notebook you purchased. This CD restores your notebook to its original state, so user data and applications will be lost.

Using Your Recovery CDs

The following sections describe how to use the Application Recovery, Driver Recovery, and System Recovery utilities.

To use the Application Recovery CD(s)

The Application Recovery CD(s) allows you to reinstall individual applications if they become corrupted or are accidentally erased. Reinstalling an individual software title may correct a problem you are experiencing with your notebook or software application; you may not need to reinstall the entire contents of your hard drive. If you need to reinstall all the software titles that shipped with your notebook, use the System Recovery CD(s). See "To use the System Recovery CD(s)" for more information. If you have any questions on using the Application Recovery CD, contact Sony Customer Support.

✍ You must be in Windows® to run the Application Recovery CD. If you have any questions on using the Application Recovery CD, contact Sony Customer Support.

1 Turn on your notebook. If your notebook is already on, close all applications.

2 When the Windows desktop appears, insert the Sony Application Recovery CD in the optical drive. The Application Recovery utility loads automatically.

3 When the Application Recovery menu appears, select the icon for the application you want to restore and then follow the on-screen instructions to complete the recovery process.

✍ Your system may include one or two Application Recovery CDs. If you have two Application Recovery CDs, insert the first CD to run the Application Recovery program. You may be prompted to insert the second CD, depending on the application you wish to restore.

To use the Driver Recovery CD(s)

The Driver Recovery CD utility enables you to reinstall individual drivers and repair software applications if they become corrupted or are erased. You can reinstall an individual driver to correct a problem that you are experiencing with

your computer, hardware, or software application. VAIO Support Agent, an application repair utility, uses a vault feature on the Driver Recovery CD during its software healing process.

✍ If you need to reinstall all of the software applications that shipped with your computer, use the System Recovery CD.

You must be in Windows® to run the Driver Recovery CD utility.

Reinstalling specific drivers with the Driver Recovery CD

1. Turn on your computer. If your computer is already on, close all applications.
2. When the Windows desktop appears, insert the Driver Recovery CD into the optical disc drive.
3. Click Start in the Windows taskbar, then Control Panel. The Control Panel window appears.
4. Click Performance and Maintenance, then System. The System Properties dialog box appears.
5. From the Hardware tab, click Device Manager.
6. Click with the left mouse button to highlight the unknown device (identified by a yellow question mark) or the device for which you wish to reinstall the driver.

Device Manager screen

7 From the Action menu, click Uninstall. This will remove the device driver from your system. Click OK to confirm this action. Repeat as necessary.

8 Reboot your computer. Click Start in the Windows taskbar, and click Turn Off Computer, then Restart.

9 When the Windows desktop reappears, Windows will automatically reinstall the device driver(s) from the Driver Recovery CD.

Reinstalling all drivers with the Driver Recovery CD

1 Turn on your computer. If your computer is already on, close all applications.

2 When the Windows desktop appears, insert the Driver Recovery CD into the optical disc drive.

3 Click Start in the Windows taskbar, then Control Panel. The Control Panel window appears.

4 Click Performance and Maintenance, then System. The System Properties dialog box appears.

5 From the Hardware tab, click Device Manager.

6 Click with the left mouse button to highlight the device for which you wish to reinstall the driver.

7 From the Actions menu, choose Properties. Properties dialog box for that device appears.

Properties dialog box

8 Click Reinstall Driver. The Hardware Update Wizard appears.

9 Click Next. The wizard will search for the correct driver on your Driver Recovery CD.

10 When the recovery process is complete, click Finish. Some drivers will require that you reboot the computer to complete installation.

To use the System Recovery CD(s)

> ⚠ **This CD restores your notebook to its original state, so user data and applications will be lost.**

You can use the System Recovery CD(s) to reinstall the operating system and software titles that shipped with your notebook if they become corrupted or erased. You may not need to reinstall the entire contents of your hard drive. If you experience a problem with your notebook, reinstalling an individual device driver or software title may correct the problem. Use the Application Recovery CD(s) to reinstall individual applications or use the Driver Recovery CD(s) to reinstall device drivers. See "To use the Application Recovery CD(s)" for more information.

The System Recovery CD contains a backup copy of all the software originally installed on your hard disk drive. It can be used only to recover the hard disk of the notebook you purchased.

The System Recovery utility will perform a Full Restore with Format. It formats the hard disk drive, then restores all the original software.

> ⚠ **Full Restore with Format removes all the information on the hard disk drive. You will lose any software you have installed and any other files you have created since you started to use your notebook. This means you will have to reinstall any applications that were not included with the notebook when you purchased it. If you have any questions on using the System Recovery CD, contact Sony Customer Support.**

1. Insert the Sony System Recovery CD in the optical drive.
2. Shut down your notebook as described in the "Shutting Down Your Notebook" section of your printed Quick Start.
3. Wait four seconds and turn on your notebook.
4. Click OK to signify you have read and accept the Microsoft® End-User License Agreement.
5. When the System Recovery menu appears, follow the on-screen instructions to complete the recovery process.

If your notebook does not start from the Recovery CD

1. Press the power button and hold it for more than four seconds to turn off the notebook.
2. Turn on the notebook. When the Sony logo is displayed, press the F2 key. The BIOS setup menu screen appears.
3. Press the arrow keys to select the Exit menu.
4. Press the arrow keys to select "Get Default Values" and then press the Enter key. The message "Load default configuration now?" appears.
5. Check that "Yes" is selected, then press the Enter key.
6. Press the arrow keys to select "Exit" (Save Changes) and then press the Enter key. The message "Save configuration changes and exit now?" appears.
7. Check that "Yes" is selected, then press the Enter key. The notebook restarts from the Recovery CD.

✍ Your system may include one or more System Recovery CDs. If you have two System Recovery CDs, insert the first CD to run the System Recovery program. You are prompted to insert the next CD once the information from the previous CD has been installed.

The recovery process takes from 30 minutes to 60 minutes to complete.

After recovering your system using the System Recovery CD(s), you may be prompted to insert your Application Recovery CD(s) after restarting Windows. Insert the Application Recovery CD to automatically complete recovery of your system.

Troubleshooting

This section describes how to solve common problems you may encounter when using your notebook. Many problems have simple solutions, so try these suggestions before you contact Sony PC Support (http://www.sony.com/pcsupport). Consult the following sections:

- Troubleshooting Your Notebook
- Troubleshooting the LCD Screen
- Troubleshooting the Mouse and Touchpad
- Troubleshooting Drives, PC Cards and Peripheral Devices
- Troubleshooting Software
- Troubleshooting the Modem
- Troubleshooting Audio
- Troubleshooting the Printer
- Troubleshooting i.LINK devices

Troubleshooting Your Notebook

My notebook does not start.

- ❑ Check that the notebook is plugged into a power source and that it is turned on. Check that the power indicator on the front panel of the notebook indicates that the power is on.
- ❑ Check that the battery packs are inserted properly and that they are charged.
- ❑ Make sure there is no floppy disk in the floppy disk drive.
- ❑ Confirm that the power cord and all cables are connected firmly.
- ❑ If you plugged the notebook into a power strip or uninterruptible power supply (UPS), make sure the power strip or UPS is turned on and working.
- ❑ If you are using an external display, check that it is plugged into a power source and turned on. Check that the brightness and contrast controls are adjusted correctly. See the manual that came with your display for details.
- ❑ Condensation may cause the notebook to malfunction. If this occurs, do not use the notebook for at least one hour.
- ❑ Take the battery pack off the notebook, unplug the power cord and plug it in again, then turn on the power.

My notebook starts, but a BIOS error is displayed.

When the internal backup battery is low on power, it may not start your system properly. The message “Press <F1> to resume, <F2> to setup” appears at the bottom of the screen. Follow these steps:

1 Press F2. The BIOS Setup menu appears.

2 Set the date (month/day/year). Press Enter.

3 Press ↓ to select System Time, then set the time (hour: minute: second). Press Enter.

4 Press → to select Exit, then press ↓ to select Get Default Values. The message “Load default configuration now?” appears.

5 Select Yes and press Enter.

6 Select Exit (Save Changes), and then press Enter. The message “Save Configuration changes and exit now?” appears.

7 Select Yes, and then press Enter. The notebook restarts.

My notebook starts, but the message "Operating system not found" appears and Windows does not start.

Make sure there is no floppy disk in the floppy disk drive (non-bootable).

- If a non-bootable floppy disk is in the drive, follow these steps:
  1. Turn off the notebook, and then remove the floppy disk.
  2. Restart the notebook and confirm that Windows starts properly.
- If Windows still does not start, follow the steps below to initialize the BIOS:
  1. Remove any floppy disk from the floppy disk drive.
  2. Turn off the notebook.
  3. Remove any peripheral devices connected to the notebook.
  4. Turn the notebook back on.
  5. Press the F2 key when the Sony logo appears. The BIOS setup menu screen appears.
  6. Press the directional arrow keys to select the Exit menu.
  7. Press the arrow keys to select "Get Default Values" and then press Enter. The message "Load default configuration now?" appears.
  8. Select Yes, then press Enter.
  9. Use the directional arrow keys to select "Exit" (Save Changes), and then press Enter. The message "Save configuration changes and exit now?" appears.
  10. Select Yes, then press Enter. The notebook restarts.

If your notebook continues to display the message "Operating system not found," and Windows does not start, use your supplied System Recovery CD to restore the operating system and software titles shipped with your notebook. See "To use the System Recovery CD(s)" for more information.

> ⚠ **The System Recovery CD restores your notebook to its original state, so user data and applications will be lost.**

My notebook stops responding or does not shut down.

It is best to shut down your notebook using the Turn Off Computer command on the Windows Start menu. Using other methods, including those listed here, may result in loss of unsaved data.

- Try restarting the notebook. On the Windows taskbar, click Start, select Turn Off Computer, and then click Turn Off.
- If you cannot restart as described in the preceding step, you can restart the notebook by pressing the Ctrl+Alt+Delete keys at the same time. The Windows Task Manager dialog box appears, and you can turn off the computer from the Shut Down menu.
- If the previous step does not work, press and hold the power button for at least four seconds. This turns off the power.
- If your notebook stops responding while playing a CD or DVD, stop the CD/DVD, and restart the notebook by pressing the the Ctrl+Alt+Delete keys at the same time. The Windows Task Manager dialog box appears, and you can turn off the computer from the Shut Down menu.
- Unplug the notebook from the AC adapter and remove the battery pack from your notebook.

✍ Pressing the Ctrl+Alt+Delete keys to turn off the computer via Windows Task Manager, or turning off the computer with the power switch may result in data loss in files that are currently open.

The Power Management setting is not responding.

Your notebook's operating system may become unstable if it is interrupted or if you attempt to make changes before the notebook completely enters a lower power state, such as Hibernate.

To restore the notebook to its normal operating stability:

1. Close all open applications.
2. Restart the notebook by pressing Ctrl+Alt+Delete keys at the same time. The Windows Task Manager dialog box appears, and you can restart the computer from the Shut Down menu.

✍ If this procedure does not work, press and hold the power button for four seconds or longer to shut down the notebook.

The sound of my notebook's fan is too loud.

Use the PowerPanel™ utility to change the Thermal Control Strategy setting to Quiet. This setting slows down the CPU speed. See PowerPanel Help for more information.

Why does the System Properties dialog box display a slower CPU speed than advertised?

This is normal. Because your computer's CPU utilizes a type of CPU speed controlling technology, System Properties may display the CPU's current speed instead of the maximum advertised speed.

Troubleshooting the LCD Screen

My LCD screen is blank.

- Check that the notebook is plugged into a power source and that it is turned on.
- Check that the power indicator on the notebook is on.
- Check that the battery pack is inserted properly and charged.
- The notebook may be in LCD (Video) Standby mode. Press any key to activate the screen.
- The display mode may be set to external display mode. Press and hold the Fn key while pressing F7 several times.

My LCD screen continues to show the previous screen.

Press the Windows® key and D key twice to refresh the screen.

The image on my connected external display is not centered or sized properly.

Use the controls on your external display to adjust the image. See the manual supplied with your display for more information.

I want to change the video resolution of my display.

Follow this procedure to change the video resolution of your display:

1. Click Start, select Control Panel, select Appearance and Themes, and then click the Display icon.
   The Display Properties dialog box appears.
2. Click on the Settings tab.
3. Move the Screen Area slider to change your video resolution.

I want to change the display resolution for TV Out

Follow this procedure to change the video resolution of your display:

1 First ensure that your notebook has been started with the TV Out jack plugged in.

2 Click Start, select Control Panel, select Appearance and Themes, and then click the Display icon. The Display Properties dialog box appears.

3 Click on the Settings tab, and click the Advanced button. The Sony Notebook LCD dialog box appears.

4 Click on the Intel® Graphics Technology tab.

5 Click on the Graphics Properties button. The Intel® Graphics Controller Properties dialog box appears.

6 Click the Television icon and choose 640 x 480 as the Screen Area display resolution.

✍ The screen resolution must be set to 640 x 480 dots in order to play a DVD while using the TV Out jack. See "Connecting a TV Display" for more information.

I cannot switch the LCD display to TV, and vice versa.

1 Ensure that the TV was connected, configured, and powered on correctly prior to starting the notebook. See "Connecting a TV Display" for more information.

2 Remove the DVD video disc if it is inserted in the optical drive.

Troubleshooting the Mouse and Touchpad

My mouse does not work.

- If you are using an external PS/2® mouse, check that the mouse is plugged into the mouse port. See “Connecting an External Mouse or Keyboard” for more information.
- If you are using an optional, compatible Sony USB mouse, check that the mouse is plugged into the USB port.
- If you are still experiencing problems, use your supplied Application Recovery CD(s) to reinstall the mouse drivers. See “Using Your Recovery CDs” for more information.

My touchpad does not work properly.

You may have disabled the touchpad without a mouse being connected to the notebook. To enable the touchpad:

1. Press the Windows® key and use the arrow keys to select All Programs, and then Sony Notebook Setup.
2. Select the Touchpad tab using the arrow keys.
3. Select Enable Touchpad, and then press Enter.

You must restart the notebook to make the touchpad work again.

If your touchpad is interpreting a single tap as a double-click, you must adjust the button assignments. Follow these steps:

1. Press the Windows key and use the arrow keys to select Control Panel. The Control Panel window appears.
2. Press the Tab key until Printers and Other Hardware is highlighted, and press Enter. The Printers and Other Hardware window appears.
3. Press the Tab key until Mouse is highlighted, then press enter. The Mouse Properties dialog box appears.
4. Change the button assignments in the Mouse Properties dialog box. (One of the buttons is assigned to the double-click action.)

If this procedure does not work, ensure that another mouse was not installed. You may need to use your supplied Driver Recovery CD(s) to reinstall the mouse drivers. See "To use the Driver Recovery CD(s)" for more information.

The pointer does not move while I am using the Touchpad or Mouse.

- The computer should be restarted. Follow these steps:
  1. Press the Windows key.
  2. Press the "U" key to select Turn Off Computer, and wait at least four seconds.
  3. Press the "R" key to restart your computer.
- If you cannot turn off your notebook as described in the step above, press Ctrl+Alt+Delete keys at the same time. The Windows Task Manager dialog box appears, and you can turn off the computer from the Shut Down menu. Wait at least four seconds, and then restart the computer.
- If you cannot restart your notebook as described in the step above, press and hold the power button for more than four seconds to turn off the notebook.
- If the pointer does not move while playing a disc, press Ctrl+Alt+Delete keys at the same time. The Windows Task Manager dialog box appears, and you can restart the computer from the Shut Down menu.
- If this procedure does not work, ensure that another mouse was not installed.
- You may need to use your supplied Driver Recovery CD(s) to reinstall the touchpad drivers. See "To use the Driver Recovery CD(s)" for more information.

Troubleshooting Drives, PC Cards and Peripheral Devices

My floppy disk drive cannot write to a floppy disk.

- ❑ Check that the floppy disk drive is properly inserted into the multipurpose bay. See "Using the Floppy Disk Drive" for more information.
- ❑ Check that a formatted floppy disk is properly inserted into the floppy disk drive.
- ❑ If the floppy disk is write-protected, disable the write-protect feature or use a floppy disk that is not write-protected.

My optical drive is not playing a CD or DVD properly.

- ❑ Make sure the label of the disc is facing up.
- ❑ If the disc requires software, make sure the software is installed according to the manufacturer's instructions.
- ❑ A dirty or damaged disc may cause the notebook to stop responding while it tries to read the disc. If necessary, restart the notebook, remove the disc, and then check it for dirt or damage.
- ❑ If you see video but can not hear audio, check all of the following:
  - ❑ Check that your optical drive does not have the mute setting enabled.
  - ❑ Check the volume setting in the audio mixer.
  - ❑ If you are using external speakers, check the volume settings, and then check the connections between your external speakers and the notebook.
  - ❑ Click Start, then Control Panel, then System, and then Device Manager. Check that the correct drivers are installed properly.
- ❑ Do not use adhesive labels to identify the CD. The label may come off while the disc is in use in the optical drive and cause the drive to malfunction.
- ❑ If a region code warning appears when you try to use your optical drive, it may be that the DVD you are trying to play is incompatible with the optical drive. Check the region code listing on the DVD packaging.
- ❑ Condensation may cause the notebook to malfunction. If this occurs, do not use it for at least one hour.

My optical drive tray does not open.

- Make sure the notebook is turned on.
- Press the Eject button on the optical drive.
- If the Eject button does not work, open the tray by inserting a thin, straight object (such as a paper clip) in the hole to the right of the Eject button.

I cannot use Digital Video (DV) devices. The message "DV equipment seems to be disconnected or turned off" appears.

- Check that the DV device is turned on and that the cables are properly connected.
- If you are using multiple i.LINK®* devices, the combination of the connected devices may cause unstable operation. In this case, turn off your notebook and all connected devices. Disconnect the devices that are not in use. Check the connections for each device, then restart your notebook.

✍ You can purchase compatible i.LINK cables from your local retailer, through the Sony VAIO® Direct Web site (http://www.sonystyle.com/vaio), or by calling 1-888-315-7669 (toll free).

My PC Card is not working.

- Make sure the PC Card is installed properly.
- Make sure the PC Card is compatible with Microsoft® Windows®.
- Use the Sony Notebook Setup utility to disable devices you are not currently using.
- If you are using two PC Cards, use the Sony Notebook Setup utility to disable the devices you are not currently using.
- Make sure any necessary drivers were installed properly. See "Using Your Recovery CDs" for more information on using the drivers.

* i.LINK is a Sony trademark used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Troubleshooting Software

My software program stops responding or crashes.

Contact the software publisher or designated provider for technical support. See "Software Support Information" for more information.

When I click an application icon, the message "You must insert the application CD into your optical drive" appears and the software does not start.

- Some titles require specific files that are located on the application CD. Insert the disc and try starting the program again.
- Make sure you place the CD in the tray with the label side facing up.

I cannot use the DVgate software.

If your notebook is using the Ultimate Battery Life profile for its power saving mode, you cannot use DVgate™ or Smart Connect software. Please select another profile. Preferably, connect your notebook to AC power when using these features.

✍ In the event that a system recovery is necessitated, Sonic Foundry SoundForge® XP must be reinstalled from the Application Recovery CD after using the System Recovery CD.

Troubleshooting the Modem

My modem does not work.

- ❑ Check that the phone line is plugged into the line jack. See "Connecting a Phone Line" for more information.
- ❑ Check that the phone line is working. You can check the line by plugging in an ordinary phone and listening for a dial tone.
- ❑ Check that the phone number the program is dialing is correct.
- ❑ Check that the software you are using is compatible with the notebook's modem. (All preinstalled Sony programs are compatible.)
- ❑ If you are still experiencing problems, use your supplied Driver Recovery CD(s) to reinstall the modem drivers. See "To use the Driver Recovery CD(s)" for more information.

My modem connection is slow.

Your notebook is equipped with a V.90/K56flex-compatible modem. Many factors may influence modem connection speed, including telephone line noise or compatibility with telephone equipment (such as fax machines or other modems). If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet Service Provider (ISP), check the following:

- ❑ Have your phone company check that your phone line is free from any line noise.
- ❑ If your problem is fax-related, check that there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- ❑ If you are having a problem connecting with your Internet Service Provider, check that the ISP is not experiencing technical problems.
- ❑ If you have a second phone line available, try connecting the modem to that line.

Troubleshooting Audio

My speakers make no sound.

- If the built-in speakers are turned off, press Fn+F3 to turn on the speakers.
- If the speaker volume is turned to the minimum, press Fn+F4, and then press ↑ or → to increase the volume or you can use the Jog Dial control to control the volume.
- If nothing is displayed when you press Fn+F3 or Fn+F4.
  - Double click System in Control Panel.
  - Set the sound device to enable in Device Manager.
- If your notebook is powered by batteries, check that the battery packs are inserted properly and that they are charged.
- If you are using an application that has its own volume control, check that the volume is turned up.
- Check the volume controls in the Windows® taskbar.
- If you connect external speakers, check that the speakers are properly connected and the volume is turned up. If the speakers have a mute button, make sure it is off. If the speakers are powered by batteries, check that the batteries are inserted properly and that they are charged.
- If you have connected an audio cable to the Headphone jack, disconnect the cable.
- If you are still experiencing problems, use the supplied Driver Recovery CD(s) to reinstall the drivers. See “To use the Driver Recovery CD(s)” for more information.

My microphone does not work.

If you are using an external microphone, check that the microphone is plugged into the Microphone jack. See “Connecting an External Microphone” for more information.

Troubleshooting the Printer

I cannot print.

The default setting for the printer port mode is correct for most printers. If you cannot print, try changing the printer port mode. In Sony Notebook Setup, select the Printer tab. If the printer port mode is set to ECP, change it to bi-directional. If the printer port mode is set to bi-directional, change it to ECP. See “Displaying the Sony Notebook Setup Screen” for details on using Sony Notebook Setup.

Your connected printer may not function after the notebook resumes from a power saving mode. If this occurs, follow these steps to reset the printer connection:

1. Click Start and select Control Panel. The Control Panel window appears.
2. Click Printers and Other Hardware, then click Printers and Faxes.
3. Right-click on the icon of the printer that is not functioning, and select Properties to access the Properties window.
4. Click OK to close the Properties window. The printer should now function properly.

Ensure that the printer is compatible with the Windows® operating system installed on your computer, and that it has the correct printer drivers.

Troubleshooting i.LINK devices

I cannot establish a connection between two VAIO computers when using an i.LINK cable.

1 Disconnect the i.LINK® * cable from both computers and reconnect it.

2 Wait for the computers to respond. If neither computer responds after a few moments, restart both computers.

✍ The computers may not recognize an i.LINK connection after returning from a power saving mode (Standby or Hibernate). If that happens, restart the computers to establish a connection.

* i.LINK is a Sony trademark used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system, and compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Getting Help

Sony provides you with several support options to answer questions about your VAIO® Notebook or the preinstalled software. Refer to these resources in the order they are listed.

Support Options

1	***VAIO® Notebook User Guide* and *VAIO® Notebook Quick Start*** The online VAIO® Notebook User Guide and printed VAIO® Notebook Quick Start provide you with information on how to maximize your notebook capabilities and solve common problems. To access the online user guide, click Start on the Windows® taskbar, select Help and Support, and click on VAIO User Guide. The Quick Start is supplied in the box with your notebook.
2	**Manuals and Online Help Files** The software preinstalled on your notebook may come with an online manual. These manuals are stored on the hard disk drive as online help files. You can find the help files from the Help menu under the specific software application. Some software applications may come with a printed manual.
3	**Operating System Online Support** Your notebook comes preinstalled with Microsoft® Windows®. For operating system support, you can access Microsoft® customer support at: http://support.microsoft.com/directory/.
4	**VAIO Support Agent** You can find VAIO Support Agent by clicking Start and then selecting Help and Support. Using advanced diagnostic technology, Sony's VAIO Support Agent runs scheduled protections of your applications, network settings, and other important software settings. When your software is protected, you can use VAIO Support Agent to repair software problems by restoring your software to any of the previously protected states.
5	**Sony PC Support** This service provides you with instant access to information on commonly encountered problems. Enter a description of your problem and the Knowledge Database searches for the corresponding solutions online. You can access Sony PC Support at: http://www.sony.com/pcsupport.

6	**Sony Fax-on-Demand** This service, which requires a fax machine or your fax software, provides answers to commonly asked questions. You can use this automated service to request a list of available topics, then select the topics that you want to receive. To contact the Sony fax-on-demand service, call: 1-888-4-SONY-PC (1-888-476-6972).
7	**Sony Customer Support** Software support is available free of charge for 90 days after the original date of purchase. You can call and speak with a Sony Customer Support Representative without using your computer by calling: 1-888-4-SONY-PC (1-888-476-6972).

Software Support Information

Adobe Acrobat® Reader, Photoshop® Elements (Adobe Systems, Inc.)

Web site	http://www.adobe.com/
phone	206-675-6126 (fee-based support)
e-mail	techdocs@adobe.com
hours	M-F, 6 AM-5 PM PST

America Online® (America Online, Inc.)

Web site	http://www.aol.com
phone	800-827-3338
hours	7 days a week, 24 hours a day

Apple QuickTime™ (Apple Computer Inc.)

Web site	http://www.apple.com
phone	800-692-7753
hours	7 days a week, 24 hours a day

ArcSoft PhotoPrinter® 2000 Pro (ArcSoft, Inc.)

Web site	http://www.arcsoft.com
e-mail	support@arcsoft.com
phone	510-440-9901
fax	510-440-1270
hours	M-F 8:30 AM - 5:30 PM PST

EarthLink™ Network Total Access (EarthLink Network Inc.)

Web site	http://support.earthlink.net/
e-mail	support@earthlink.net
phone	800-890-5128, 800-890-6356
hours	7 days a week, 24 hours a day

PC-Cillin® (Trend Micro, Inc.)

Web site	http://www.antivirus.com/pc-cillin/
phone	949-387-7800
e-mail	support@trendmicro.com
hours	M - F 8 AM - 5 PM (PST)

Quicken® (Intuit Inc.)

Web site	http://www.intuit.com/support
phone	800-644-3193
hours	7 days a week, 24 hours a day

RealJukebox, RealPlayer (Real Networks, Inc.)

Web site	http://service.real.com/rjoptions.html
e-mail	http://service.real.com/help/call.html
phone	206-674-2680
fax	M-F, 8 AM-6 PM PST; Sat-Sun, 7:30 AM-4 PM PST

Sony Applications (Sony Electronics Inc.)

Web site	http://www.sony.com/pcsupport
phone	888-4-SONY-PC (888-476-6972)*
hours	7 days a week, 24 hours a day

* Support from 1-888-4-SONY-PC is free of charge for 90 days after the original date of purchase.

Windows® Operating System, Internet Explorer, Word (Microsoft Corp.)

Web site	http://www.sony.com/pcsupport
phone	888-4-SONY-PC (888-476-6972)*
hours	7 days a week, 24 hours a day

* Support from 1-888-4-SONY-PC is free of charge for 90 days after the original date of purchase.

WinDVD® (InterVideo, Inc.)

Web site	http://www.intervideo.com
phone	510-651-0888

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4-SONY-PC (1-888-476-6972) or find Sony Customer Service on the Web at: http://www.sony.com/pcsupport.

A

About This Computer tab 65
AC power setting 68
Access Point, Wireless LAN 61
adding
    hardware 41
    memory 77
    peripherals 41
    printers 47, 48
adjusting
    brightness 14
    volume 14
Alt key 11
Application Recovery CD 93
Applications key 12
attaching port replicator 42
audio
    troubleshooting 114
Audio tab 65

B

Basic/Advanced tab 65
battery information 71
battery pack
    inserting a second 30
battery packs
    charge status icons 71
    charging 31
    indicator lights 13, 30
    removing 30, 32
brightness
    adjusting 14
built-in speakers
    See also speakers 14
buttons
    Eject 21, 22
    Start (Windows) 64

C

camera

digital video recorder 55
Power Management profile 68
canceling commands 11
Caps Lock indicator light 14
CD-ROM/DVD-ROM discs
ejecting 22
handling 25
inserting 21
CD-RW/DVD combo drive
using 21
charging battery packs 31
coin-operated telephones 38
computer
connecting to another 58
customizing 63
expanding capabilities of 61
setup screen 64
troubleshooting 101
connecting
digital video recorder 55
external mouse or keyboard 46
external speakers 59
hard drives 27
i.LINK device 55
microphone 60
monitor 49
multimedia computer display 49
network 27
parallel port printer 47
phone line 38
port replicator 42
projector 50
to another computer 58
TV display 52
USB device 54
USB port printer 48
weight saver 34
correction keys 11
Ctrl key 11

cursor-movement keys 11
customizing your computer 63

D

digital video camera 55
display
- connecting a monitor
- connecting a multimedia computer display 49
- connecting a projector 50
- connecting a TV 52
- mode 74
- options 51
- selecting 51
- troubleshooting 106

Driver Recovery CD 93
drives
- floppy disk 18
- installing additional hard disk 27
- optical 21
- troubleshooting 110

DV In/Out 55
DVD
- playing 23

DVD-ROM drive
- closing tray 22
- handling discs 25
- opening tray 21
- using 21

E

Eject button 21, 22
ejecting
- battery packs 32
- CD-ROM/DVD-ROM discs 22
- weight saver 34

Escape key 11
expansion memory configuration 78
external devices
- display 51
- display(see also monitor)

speakers 14, 59
F
floppy disk drive
disconnecting 19
troubleshooting 110
using 18
Fn key 12
Fn key, combination commands 14
function keys 12
H
handling CD-ROMs and DVD-ROMs 25
hard drives
indicator light 13
installing additional 27
hardware
online support 118
PC Cards 27
troubleshooting 110
help
getting 117
Hibernate mode 15, 36
I
i.LINK 55
connecting an i.LINK device 55
Smart Connect 58
IEEE1394 55
indicator lights 13
battery 13, 30
Caps Lock 14
hard drive 13
Num Lock 14
Scroll Lock 14
Insert key 11
inserting
CD-ROM/DVD-ROM discs 21
PC Cards 27
second battery pack 30
installing

hard drives 27
hardware 41
memory module 82
peripherals 41
J
jacks
multimedia computer display 49
port replicator 42
K
keyboard
connecting external 46
keyboard, using 10
L
LCD
selecting to display output 51
troubleshooting 106
M
Maximum Battery Life power setting 67
Maximum Performance power setting 67
memory
adding 77
viewing the amount of 84
memory module
expansion 78
installing 82
removing 80
microphone
connecting 60
troubleshooting 114
modem
connecting a phone line 38
troubleshooting 113
monitor
connecting 49
selecting 51
switching among 15
mouse
connecting external 46

troubleshooting 108
multimedia computer display 49
multiple phone lines 38
N
navigation keys 11
network
connecting 27
Notebook Setup tabs 65
Num Lock
indicator light 14
O
opening optical drive tray 21
operator keys 11
optical drive
CD-RW/DVD combo drive 21
opening tray 21
using 21
output devices
adding 47, 48
P
parallel port printer 47
party phone lines 38
PBX 38
PC Card
inserting 27
slots 27
Wireless LAN 62
PC Cards
removing 28
troubleshooting 110
PDA 61
peripheral devices
troubleshooting 110
Personal Digital Assistant 61
phone
connecting line 38
jack 38
playing

DVDs 23
port replicator
connecting 42
ports
printer 47, 48
serial port 42
power indicator 13
power management
settings 66
Power Management Off power setting 67
Power On Password tab 65
power saving modes
Hibernate 15, 36
Standby 36
power setting
AC 68
Maximum Battery Life 67
Maximum Performance 67
Power Management Off 67
Standby 69
PowerPanel
activating 66
customizing toolbar 67, 69
Print Screen key 11
printer
parallel port 47
troubleshooting 115
USB 48
Printer tab 65
projector 50

R

recharging battery packs 31
Recovery CD 93
removing
battery packs 32
floppy disk drive 19
memory module 80
optical discs 22
PC Cards 28

weight saver 34
replacing
battery packs 30
restoring data 93
S
Scroll Lock
indicator light 14
second battery pack 30
selecting
display 51
LCD 51
monitor 51
serial port 42
setting up your PC
support 118
setup screen
About This Computer tab 65
Audio tab 65
Basic/Advanced tab 65
displaying 64
Power On Password tab 65
Printer tab 65
Touchpad tab 65
setup tabs 65
Shift key 12
Smart Connect 58
software
troubleshooting 112
Software list 85
Sony Fax-on-Demand service 119
Sony Notebook Setup screen 64
Sony Service Center 121
speakers
external 59
switching 14
troubleshooting 114
volume 14
Standby mode 14, 36, 69
Start button 64

support options 117
switching
display 15
monitor 15

T

television
connecting 52
touchpad
troubleshooting 108
Touchpad tab 65
touchpad, using 16
troubleshooting
audio 114
drives, PC Cards and peripherals 110
general 101
LCD screen 106
modem 113
mouse and touchpad 108
notebook 102
printer 115
software 112
TV
connecting 52

U

USB
connecting 54
connector 54
mouse 54
printer 48
USB port printer, connecting 48
using
floppy disk drive 18
keyboard 10
optical drive 21
PC Cards 27
second battery pack 30
touchpad 16
weight saver 34

V

video camera 55
viewing the amount of memory 84
volume control 14
volume, adjusting 14

W

weight saver
- connecting 34
- fold-out arm 34
- removing 34
- using 34

Windows
- Explorer 12
- Find window 12
- help 12
- key 12
- key combinations 12
- taskbar 104

Wireless LAN 61